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PLANNED MEDICAL DISTRICTS

A THESIS

Presented to
the Faculty of the Graduate Division
Georgia Institute of Technology
by
Robert H. Doyle

In Partial Fulfillment
of the Requirements for the Degree
Master of City Planning

Georgia Institute of Technology

June, 1959

PLANNED MEDICAL DISTRICTS

APPROVED:

Date approved by Chairman:

June 8, 1959

ACKNOWLEDGMENTS

The author gratefully acknowledges the assistance and encouragement of Howard K. Menhinick, Regents' Professor of City Planning; Malcolm G. Little, Jr., Assistant Professor of City Planning; and Nahum Z. Medalia, Assistant Professor of Social Sciences.

Gratitude is extended to Robert and Company of Atlanta, Georgia for the generous financial assistance they tendered the author during the past year of advanced study at Georgia Institute of Technology. This thesis could not have been completed at this time without the Robert and Company scholarship funds.

The author also wishes to express his appreciation to Mary Jane Sidders, Marsue Crow, and Betty Duncan for typing the final manuscript, and to Mary Beck for her invaluable assistance in helping to prepare the included maps.

As a final measure of thanks, this thesis is dedicated to the author's wife, Phyllis, who provided aid and encouragement throughout every phase of the study.

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ABSTRACT

The primary purpose of this study is to correlate the tendency for related medical facilities to locate in the near vicinity of general hospitals with the current planning trend toward the development of compatible land use groups where possible.

In order to determine a feasible method for making such a correlation, three phases of research were undertaken and carried out. The first involved a study of recent trends in the world of medicine and in the field of land use planning; the second was a comprehensive survey of contemporary zoning ordinances; and the third consisted of several field inspections of existing hospital areas or neighborhoods.

The results of this three-pronged research tended to bear out the contention that certain specific land uses are attracted to a given area solely because a general hospital is already located there. Among others, it was found that public health centers, professional office buildings for doctors, and a number of commercial businesses can almost always be found in close proximity to a general hospital.

Moreover, there are certain types of land uses, such as psychiatric facilities and clinical laboratories, which have a real need to be near hospitals yet are prevented from doing so by zoning ordinance provisions.

All of the various study findings pointed to the need for some means of permitting related and compatible uses to group about a general hospital on a pre-planned basis. Therefore, as an end product of the study, a new concept was evolved for consideration. Defined and described

as a "planned medical district," the proposed concept simply involves a uniform and comprehensive method of grouping related uses adjacent or near to general hospitals. Planning criteria, zoning provisions, site requirements and other factors were developed in some detail for these districts.

The study proved one thing conclusively--regional, site and unit planning processes for medical facilities reflect recent medical treatment and hospital trends to a reasonable degree. However, a major void seems to exist on the urban level, and this is where additional research is needed.

CHAPTER I

PLANNING FOR MEDICAL FACILITIES: SOME IMPORTANT TRENDS

Introduction

A number of highly significant changes have taken place since 1940 with respect to the location and utilization of medical facilities. In just two short decades, revolutionary new drugs, better equipment and improved treatment methods have dramatically reduced the need for such old standbys as tuberculosis sanitariums, contagious hospitals and "maximum security" mental institutions. In fact, there is a strong likelihood that very few isolated special-care facilities of any type will be built in the future. Instead, versatile and comprehensive "community medical centers" are already being developed, especially in urban areas. This latter trend is a reflection of the growing tendency to consolidate health and medical services in or near the so-called general hospital.

During this same twenty year period, the field of city planning has also experienced some major revisions. In particular, traditional methods of planning for certain uses of land--notably commercial and industrial areas--have been altered considerably. Pressures exerted by a rapidly expanding, mobile population have forced planners to seek new ways and means of combining compatible land uses. Perhaps the most familiar product of this effort is the neighborhood or regional shopping center. However, planned industrial districts and other group developments have also been utilized extensively since World War II.

The American people have shown a marked preference for an auto-

mobile-oriented, suburban way of life. If this development pattern continues, which is likely, the technique of promoting harmonious land use groupings may prove to be of even greater value in the future. It thus seems appropriate to correlate the trend towards medical facility consolidation with the planning tendency to unify compatible land uses. This study has been undertaken in an effort to develop such a correlation. Its main objectives are to: (1) detail the need for and the advantages of what may be designated as "planned medical districts"; (2) outline the general planning considerations for such districts; and (3) determine logical and suitable procedures to guide the formation, administration and regulation of these special areas.

In order to accomplish a task of this magnitude, it is essential that information and data be gathered from many different sources. For instance, one phase of the research for this project involved a comparison of the medical facility provisions of more than 280 zoning ordinances. These ordinances represent almost every state in the Union. In addition, all available literature that applied to the subject was searched and documented. This included architectural, medical, planning and sociological periodicals, as well as pertinent books, monographs and special studies. Personal interviews with hospital administrators, public health officials and other medical representatives were held. As a final measure, several existing general hospital areas were field inspected. This survey furnished an indication of what land uses may be expected to locate in the vicinity of a general care medical facility.

The rest of this first chapter is devoted to a more detailed account of the medical facility planning trends upon which this thesis

is based. Subsequent chapters will be directly concerned with the three objectives outlined above.

The Development of Hospital Service

Today, in the event of serious illness or injury, the average person does not hesitate to enter a hospital for needed medical treatment. In fact, many millions of Americans now consider that hospital care is valuable enough to pay for in advance, through the medium of hospitalization insurance.

Unfortunately, this high public regard for hospital service dates back only as far as the early part of this century. It is necessary to briefly review the historical development of hospitals in order to understand why such facilities were more often avoided than utilized prior to 1900--at least by those who could afford the luxury of home medical care.

According to historians, the Pre-Christian civilization in Greece, Egypt, Babylonia and India all erected edifices or temples that functioned both as medical schools for practitioners and as resting places for patients under observation or treatment.

With the coming of the Christian era, asylums for travelers and victims of disaster were established and operated by various religious communities. Although special hospitals for lepers and cripples existed in the Roman Empire as early as the 4th Century A.D., institutions built to serve the thousands of wanderers that roamed over the countryside in these times were far more common. In his book Society and Medical Progress, Bernhard F. Stern indicates that:

The 'xenodochia', or asylums for travelers of the Middle Ages, were by no means hospitals in the modern sense, although they are often designated as such. They served merely to render accommodation to the poor, blind, lame, sick, aged, strangers, and not to give medical care. Frequently they were built outside of the city wall, for it was regarded as unsafe to let the stranger into the city. (1)

The devastating black plague that scourged Europe in the 17th century was able to spread almost at will--simply because suitable medical treatment facilities were few in number and poorly equipped to take care of contagious disease victims. Reform movements spawned as a result of the havoc and misery produced by this epidemic led to the establishment of many hospitals in the 18th century. However, the greatest number were not maintained by state funds, but rather by the insecure method of voluntary contribution. This situation gave rise to certain deplorable practices. In England, for instance:

It was customary to demand a sum for burial expenses from patients on admission. This was an understandable, if gruesome, caution on the part of the administrators. For the mortality rate was shockingly high, and the hospital was dreaded as a place which the poor must enter for their death agonies. It is little wonder that entrance of a patient to a hospital was like signing a death warrant, when one considers the offensive sanitary conditions prevailing in a hospital during this period. Windows were always shut tight and the floors sanded. Bedsteads were of wood and since the patients were never washed and seldom had a change of bed linen, the beds often swarmed with vermin. Nurses were untrained menial workers, and hospital routine and discipline for staff and patients were nonexistent. (2)

Early 19th century American hospitals were little better than their English counterparts with respect to internal conditions. The death rate was also appallingly high and patients suffering from contagious and noncontagious ailments were often intermixed due to the absence of isolation facilities. In many cases, persons receiving treat-

ment for relatively minor illnesses contracted far worse maladies as a result of their hospital stay.

Since it was preferable, and indeed advisable, to receive medical care at home or in the doctor's office, if possible, the erection of new hospitals proceeded at a slow pace. Even as late as 1873, there were only 178 institutions that could be classified as hospitals in the entire United States.

However, the last fifty-five years of the 19th century produced some medical advances that revolutionized surgical techniques, sanitary conditions and the public's attitude toward the value of hospital service. Anesthesia's introduction in 1846, the development of aseptic (free-from-bacteria) surgery, and the growth of scientific medicine permitted hospitals to function in a life-giving, healing capacity for the first time in history. Instead of being a repository for the sick-poor and those persons expected to die anyway, the hospital soon came to be known as the place where one stood the best chance for recovery in case of illness or disability. This growing confidence on the part of the public resulted in an almost unbelievable demand for new facilities. At least four thousand hospitals of various sizes and types were built and placed in operation between 1873 and 1909 alone. This represented an increase of close to 2000 per cent in just thirty-six years! It can be truly said that the last half of the 19th century contributed more to the development of hospitals than the entire preceding 3000 years.

Complexity and Change in the Twentieth Century

In the three decades between 1910 and 1940, the rate of new hospital growth in this country tapered down considerably--at least in comparison with the explosion of activity that took place as the 19th century closed and the 20th century began.

Although the total number of registered hospitals rose less than 50 per cent over these thirty years, the quantity of available hospital beds increased more than 300 per cent (3). In addition, a broad expansion occurred with respect to the scope, complexity and specialization of hospital service during this period. It was popular to develop such special facilities as tuberculosis sanitariums, state mental institutions, children's contagious hospitals, and homes specifically equipped to care for the aged. General hospitals continued to grow in over-all importance as pre-payment insurance plans made hospital service economically feasible to large segments of the population. At the same time, other types of medical service units, such as public health centers, nursing schools, and group practice doctors' clinics, were also coming into prominence.

The emergency conditions which prevailed during World War II served to magnify the fact that many areas actually possessed an agglomeration of badly located medical facilities. As a consequence, several states undertook hospital inventories in the late 1940's. The information developed as a result of these studies led to state wide health service area plans, almost all of which coordinated general hospital facilities with public health service units (4). To aid in making the

plans a reality, federal appropriations for new hospital construction were made available through the congressionally approved Hill-Burton program. A number of new hospitals has been built and financed since 1949 by virtue of Hill-Burton funds.

However, as intimated in the Introduction, post-war trends that have developed as a result of certain medical advances and changing social conditions are now threatening to produce a 20th century hospital service revolution. Several facilities (including some of those constructed in recent years) are now expected to be of little value in the near future as long as they retain their present operational methods. Also, certain existing institutions will completely disappear as the need for their particular function is eliminated or drastically reduced. Still other medical facilities will require relocation if they are to be effectively utilized.

Inasmuch as each type of treatment, research, teaching or service unit is currently being affected in a somewhat different manner, The more important medical facilities are briefly and individually described in the paragraphs that follow. These "vignettes" are designed to provide a frame of reference for subsequent chapters, as well as to indicate what changes may take place in forthcoming years with respect to specific medical service accommodations.

General hospitals:--As would be expected, the most prevalent hospital in this country is the general-care type facility. Moreover, these comprehensive treatment units are growing in popularity at the expense of those institutions equipped to treat but one variety of disease or

ailment. This trend in the direction of the general hospital is clearly indicated by Table 1 following:

Table 1. Hospital Distribution In United States,
By Type - 1927, 1941, 1957 (5)

Type of Hospital	1927		1941		1957	
	Number	% of Total	Number	% of Total	Number	% of Total
General	4,322	64	4,518	72	5,546	81
Mental	563	8	596	9	496	7
Tuberculosis	508	7	477	7	305	5
Other	1,414	21	767	12	471	7
Total	6,807	100	6,358	100	6,818	100

Since the general hospital is usually operated to serve over-all community needs, it must provide and maintain a wide range of diagnostic treatment and research facilities. This requirement not only permits the general care type of institution to draw support from a larger clientele than the so-called special hospital, but it also furnishes a powerful weapon in the unending battle to attract competent personnel.

The rapid growth of hospitalization insurance has further influenced the shift towards general hospitals. With over 40 million persons enrolled in the Blue Cross program alone, most Americans are now able to afford whatever hospital services are required in time of emergency or prolonged illness. As a result, the public has come to know of and depend upon the versatile, accessible, all-inclusive general hospital, since institutions of this nature are normally designated to participate in most pre-payment insurance plans.

In actual practice, general hospitals fall into two broad functional classifications. The activities in a community general hospital are concerned almost entirely with providing private, semi-private, and ward facilities for the hospitalization of patients with a variety of ailments; the primary function is to accommodate those in need of skilled, up to date medical service. Teaching general hospitals are usually connected with a medical school. In addition to serving the immediate community with general care and treatment provisions, this type of facility is staffed and equipped to function in a teaching and research capacity, which in turn enables it to act as a referral point for special cases that other hospitals are unable to handle.

Mental institutions.--At the present time, almost one-half of the hospital beds in the United States are reserved for and utilized by mental patients. The latest published figures indicate that 1,558,791 beds were available in all types of hospitals in the United States at the end of 1957. Of this total, 708,916 or 46 per cent were located in mental institutions. Furthermore, it has been predicted that some 13 million Americans now living will spend some segment of their life in a psychiatric medical facility (6).

Statistics such as these serve to document the often expressed opinion that mental health is currently this country's number one medical problem. As such, the utilization and location of treatment facilities for the mentally ill is becoming of vast importance to just about everybody. Doctors, patients, their relatives or friends, and public officials are no longer the only ones involved. For example, most of

our states now find that expenditures for mental health purposes are exceeded only by highway and school outlays. This situation indirectly effects the average taxpayer in that the high cost of providing care and treatment for mental patients forces the abandonment or curtailment of other needed services in some instances.

On a brighter note, the very recent development and utilization of tranquilizing drugs, such as reserpine and chlorpromazine, have virtually eliminated the necessity for prison-like measures in mental institutions. Patients who are subject to violent outbursts can now be controlled so effectively that "custody and security are no longer the chief concern of responsible authorities" (7). In the short period since reserpine was first used at the New York State Hospital in 1953, a regeneration of constructive psychiatric thinking has resulted in the advancement of several new treatment theories. In essence, the revolutionary concepts under current development include:

- 1) Mental facilities should emphasize rehabilitation rather than discharge since trained personnel can now work more easily with patients to effect lasting recovery.
- 2) The mental hospital should function more as a "therapeutic community" than merely as a custodial institution.
- 3) Care and treatment facilities for all ranges of mental illness should be available in urban locations. The usual placement of state mental institutions in isolated areas tends to produce a public impression that hospitalization means exile.
- 4) Two kinds of urban accommodations for the mentally ill have been suggested. When the need warrants--such as in large metropolitan areas--community mental hospitals

should be established. In other cases, psychiatric facilities should be made available in conjunction with general hospitals.

If these far reaching concepts are to become future realities, a large scale change in traditional public attitudes towards mental hospitals and their patients will have to be effected on a broad basis. Age-old fears, taboos, customs and superstitions with respect to such institutions are gradually declining in force and incidence, but the past necessity to locate mental facilities in isolated areas has established a difficult precedent to overcome. However, the near future seems to hold the promise of a much better public understanding of the mentally ill. As this understanding grows and develops, the barriers to the location of mental hospitals in urban areas can be expected to disappear.

Tuberculosis sanitariums.--This type of special treatment facility has experienced a sharp decline in importance over the last twenty years, as shown in Table 1. Developments in chemotherapy for the treatment of tuberculosis reduced the death rate in that disease no less than 70 per cent between 1949 and 1956--a decrease from 25.6 to 7.6 deaths per 100,000 population. Since most general hospitals are now adequately equipped to take care of any kind of contagious disease victim, including tubercular patients, the need for special contagious hospitals has substantially been eliminated.

It is likely that many, if not all, currently existing tuberculosis institutions will continue their operation for a considerable number of years, in order to care for their present complement of long-term patients. The long range trend, however, indicates that tuberculosis care and treatment will primarily be considered a general hospital function in the future.

Other special hospitals.--The era of autonomous hospitals designed to care for and treat but one type of illness is virtually over. Only a limited number of special-care facilities has been built in recent years, and most of these have been auxiliary units of a teaching general hospital complex. Economic factors are primarily responsible for this trend. The cost of providing and maintaining highly skilled specialists, expensive equipment, and adequate research facilities on an independent basis has too often proven to be an insurmountable obstacle, even for some heavily endowed institutions.

Existing special hospitals operating under private auspices will naturally continue to function as long as they remain economically feasible and medically desirable. Also, the need is not expected to diminish very soon (if ever) for such government installations as V.A. and servicemen's hospitals, local or state rehabilitation centers for the physically handicapped, and U.S. Public Health Service hospitals for narcotic addicts.*

As a group, there have probably been more new rehabilitation facilities constructed in the last few years than all other kinds of special hospitals combined. Provisions for the treatment of muscular dystrophy, cerebral palsy, paralysis victims, multiple amputees, and persons with voice, sight and hearing defects are much more prevalent now than before World War II. While occasionally these units are independently built and maintained, more frequently than not they are elements of a large medical center or general-care institution.

*The narcotic facilities are located in Fort Worth, Texas and Lexington, Kentucky.

One other special type of medical facility should be mentioned--the familiar charity hospital. A good share of these havens for the poor have gone out of existence or have been remodeled to handle paying as well as indigent patients. This is in line with the prevailing municipal tendency to build and operate new public medical institutions on the basis that income (including any special taxes) should at least equal expenses--regardless of gifts or donations. Such a policy is now both feasible and necessary. While a high income tax rate has produced a corresponding reduction in philanthropic revenue sources, increased participation in hospitalization insurance programs has also reduced the number of charity patients who must be accommodated. Thus, numerous charity institutions are no longer as necessary, or as possible, as they once were.

Medical centers.--A medical center has been defined as being "essentially a group of buildings, usually consisting of a general teaching hospital, a medical school, and one or more special hospitals." (8)

At least fifty-five centers that would meet this description are located in the United States, and seven more can be found in Canada. While they differ greatly in size, organization and administration, all have a common objective--to centralize and synchronize the essential functions of medical practices, research and teaching.

Seats of medical education form the nuclei of most of these centers and are present in all of them. For example, in New York City, separate centers have been developed around the teaching institutions of Cornell, New York University and Columbia. On the other hand,

Chicago's huge Medical Center District contains three medical schools, three nursing schools, two dental schools, one pharmacy school, Cook County General Hospital, Presbyterian Hospital, a 500 bed Veterans hospital, and the 489 bed Illinois State Tuberculosis Hospital! The buildings in this one center alone are valued in excess of \$175,000,000, and the district includes almost 480 acres of land within its borders.

Ohio State University's Health Center adheres to a three point program of objectives that seems to represent the chief reasons for developing such large medical complexes. At Ohio State, every effort is made to:

- 1) directly care for patients who are physically or acutely mentally ill and whose cases require the maximum in medical facilities and knowledge;
- 2) train physicians, nurses, dentists and allied medical arts assistants in order to preserve the health of the entire state;
- 3) engage in medical and dental research, and to disseminate the knowledge derived from this research through the mediums of publication and teaching.

Another mid-western center has demonstrated how a concentration of medical facilities can effectively serve a geographical area beyond its immediate and usually urban surroundings. The Iowa City Medical Center operates a distinctive state-wide ambulance service, consisting of 32 vehicles, each of which travels approximately 7,500 miles per month in transporting some two thousand patients to and from the Center's hospitals.

In terms of plant, equipment and endowment, the fifty-five medical

centers in this country represent an investment which runs into billions of dollars. The rapid development of these complex, versatile centers in just the last three decades is a 20th century phenomenon which also promises to continue on into the future.

Public health centers.--According to the Public Health Service of the Federal Security Agency, a public health center is "a facility primarily utilized by a health unit for the provision of public health services, including related facilities such as laboratories, clinics and administrative offices operated in connection therewith". (9)

In the early stages of this century, public health agency units were geared to deal with the prevention of disease on a community wide basis, while hospitals were thought of as places where ill or disabled persons received institutionalized care and treatment. The field of medicine was sharply separated into preventive and curative programs. However, as both hospital and public health service operations grew in scope and complexity through the years, the originally clear distinction as to the difference in functions became more and more blurred. In addition to the enforcement of laws and regulations enacted to protect the population as a whole, public health agencies became engaged in such practices as maternity and child care clinics. Hospitals, on the other hand, increased their out-patient departments and expanded their participation in community health functions.

After World War II ended, it was obvious that hospitals and health departments needed to be drawn closer together, both as to planning and operation. Accordingly, a joint statement calling attention to this need was issued in 1948 by officials of both the American Hospital Association

and the American Public Health Association. The statement included the following observation:

Preventive and curative medicine have reached the stage where they are no longer separable, and it is necessary at the present time to bring them together physically and functionally. The close physical and organizational associations of health departments and hospitals will provide a valuable step toward this essential goal. (10)

Hospitals and health agencies have heeded this advice to a large extent since 1948. Some of the new general hospitals built during the last ten years actually contain wings designed to accommodate public health agencies. In other cases, new public health centers have been constructed adjacent to, or in the near vicinity of, general hospitals. Although there is disagreement as to whether the health unit should be in, or simply near, the hospital building, most authorities recommend that the activities of each facility be carried out under separate direction.

Nursing homes.--Less than two decades ago, in 1939, the first known count of such facilities indicated the United States contained but 1,200 nursing, convalescent and rest homes. These units had a maximum combined capacity of 25,000 beds, and the greatest share of the patients were taken care of in publicly managed homes for the aged.

Within the next fifteen years, all of these figures were radically altered. A national inventory conducted by the Public Health Service in 1954 found that 25,000 nursing homes of various sorts were then in existence, with bed provisions for almost 450,000 patients. Moreover, 20,700 of the facilities or better than 80 per cent were operated and managed under private ownership.

This meteoric (and still continuing) rise in the utilization of nursing home facilities has apparently been induced by powerful economic, medical and societal changes that have been operative in the post-war period. Such factors as high income levels; increases in the scope and benefits of the social security program; a much greater percentage of older persons; an extremely mobile population; and the tendency to live in smaller houses located in the suburbs have all played a part in creating the big demand for nursing home accommodations. The emergence of this new kind of social institution is yet another 20th century phenomenon related to the world of medicine.

Since almost all nursing homes deal with aged, long-term patients often in need of hospital or doctor service, a number of authorities feel they should be affiliated with, or under, the supervision of general hospitals. It has been predicted that hospitals may "ultimately develop separate annexes, located on the hospital grounds but physically separated from the main hospital, for provision of this type of care" (11). Suggestions along these lines are currently receiving a great deal of consideration, as the isolated and detached location of most nursing homes with respect to adequate medical service facilities is a continuing and growing problem.

Other medical trends of significance.---There are certain other developing trends in the field of medicine that merit consideration. For instance, in the last few years, upwards of two hundred non-teaching hospitals in large and small cities throughout the United States have seen fit to make rental or leased space available for the use of private physicians. This

space has generally been provided in facilities owned by, or adjacent to, community hospitals. Thus far, the practicality as well as convenience of the arrangement has proven to be popular with doctors and hospitals alike.

In much the same vein, group practice clinics are tending to locate in the vicinity of general hospitals wherever possible (see Chapter III). As stated in a recent health journal article:

Physicians are finding it easier and more efficient to locate their offices in close proximity to hospitals--whether they be in separate offices, in office buildings, or in group practice accommodations. (12)

On the other hand, it is no longer considered necessary to provide staff housing accommodations within or adjacent to community type general hospitals. Although some provisions for internes may always be necessary, there is a growing body of opinion to the effect that staff members should be encouraged to live in homes of their own apart from the institution. This applies **not** only to doctors and technicians, but also to general help and nurses as well.

In connection with the latter, the training of nurses has long been an adjunct of virtually every general hospital of any size. This policy has benefited nurses by enabling them to receive tuition-free-on-the-job training, while the student nurses have provided the hospital with a relatively inexpensive labor force. However, nursing education has continued to grow more and more complex as well as expensive to administer, particularly with regard to the classroom and laboratory phases of the average program. As a consequence, the primary tendency now is to locate nursing schools in conjunction with teaching general hospitals. Such an

arrangement frees the community hospital from this often-times burdensome responsibility, and permits nursing students to receive the maximum in educational opportunities.

In conclusion, an ever-increasing number of hospitals are employing college trained hospital administrators to manage their affairs. improved hospital-patient relationships, greater economy, and a far more efficient operation have resulted from this commendable trend.

Four Levels of Planning

Today, the task of planning for our nation's supply of medical facilities is carried out on at least four distinct levels, namely: (1) regional planning; (2) urban planning; (3) site planning; and (4) building or unit planning. Each level has certain explicit characteristics of its own, and the various planning processes are handled by a different combination of groups or individuals. In order to detail the differences (as well as the similarities) between these separate levels, the four processes are outlined below.

Regional planning.--Prior to 1946, very little had been accomplished in this country with respect to any over-all coordination of medical facilities. Whereas some regions or states were relatively oversupplied with such units as general hospitals, critical shortages actually existed elsewhere. This situation was partly due to the fact that many of our major treatment institutions developed through the years under private sponsorship, and partly because the real need for medical facility coordination was not emphasized until World War II.

At any rate, enactment of the National Hospital Survey and recon-

struction (Hill-Burton) Act in 1946 prompted the states to set up special agencies to plan for general hospital services. As a prerequisite to receiving federal grants under this program, statewide master plans must be prepared and submitted annually to the Surgeon General of the United States for approval. Most of these state plans are characterized by a base, regional and district hospital service area system.

For example, the Hospital Services Division of the Georgia Department of Public Health has developed a coordinated plan that separates the state into base, intermediate and rural hospital service areas. The base areas must contain a suitable teaching hospital of a medical school, or have a population of 100,000 or more which is served by at least one 200 bed general hospital equipped to furnish internships and residencies in two or more specialties. Intermediate areas must have a minimum population of 25,000, and contain a general hospital that has at least 100 beds. All other areas carry the designation rural. Under this type of plan, the smaller institutions are associated with the larger ones for consultation purposes and also for the referral of patients in need of more specialized treatment.

In 1954, Congress made additional federal appropriations available for the construction of certain medical facilities other than general hospitals and health centers, both of which had been provided for in the original Hill-Burton legislation. The primary purpose of the later amendment was to encourage hospitals to expand their scope of services, and to make more adequate provision for the care of long-term and ambulatory patients. By the terms of the 1954 act, new facilities such as chronic disease and rehabilitation units, nursing homes, and diagnostic outpatient

clinics could be built with federal funds. Once again, the Hospital Services Division was called upon to administer the grants to Georgia in accordance with a carefully prepared and annually revised state plan for each facility.

Thus, the latest (1958) statewide hospital and medical facility plan for Georgia is actually composed of six parts. They are:

1) Coordinated hospital system plan. This is simply an organizational system that divides the state into two sections, each of which has one urban area designed as a base hospital center. These centers (Atlanta and Augusta) have the necessary accommodations and personnel to handle special cases referred to them from smaller hospitals within their section. The "chain of referral or consultation," in descending order from the base level, includes regional centers, area centers and community hospitals.

2) General hospital service area plan. As required to receive Hill-Burton funds, this plan divides the state into 56 bases, intermediate and rural hospital planning areas. Since construction grants are intended to ease conditions in those places where shortages exist with respect to hospitals and hospital beds, financial grants for totally new facilities, or new additions to existing institutions, are largely determined by area-wide hospital bed needs. These bed needs are calculated in accordance with the following recommended ratios:

Base Areas:	4.5 beds per 1,000 population
Intermediate MEDICAL Areas:	4.0 beds per 1,000 population
Rural Areas:	2.5 beds per 1,000 population

For ease of definitions, each of the 56 planning areas utilize county lines as outer limits, with the exception of Atlanta proper which serves as an area unto itself.

3) Rehabilitation facilities service area plan. In order to objectively plan for certain special facilities on a state-wide basis, Georgia has been divided into nine large units designated as Hospital and Medical Facility Areas. Grouped around nine population centers, these areas are utilized in planning for rehabilitation centers, nursing homes and special hospitals.

An inventory of existing rehabilitation services in Georgia, and a series of conferences with leaders in the field produced the determination that at least one and probably two main comprehensive multiple-disability facilities should be stationed at the teaching base hospital centers in Atlanta and

Augusta--two of the nine medical facility areas mentioned above. Auxiliary rehabilitation "screening" centers are recommended for the other seven large population centers. As a matter of record, the U.S. Public Health Service recommends one comprehensive rehabilitation center per 300,000 population for each type of disability.

4) Nursing home service area plan. The U. S. Public Health Service maintains that three nursing home beds per 1,000 population represents a reasonable and desirable standard for this type of facility. In Georgia, the basic ratio has been adjusted for each of the nine large hospital and medical facility areas in direct proportion to the following indices:

- a) the percentage of population 65 years of age or over within each area
- b) the percentage of urban population within each area
- c) the percentage of white and non-white

In all of the nine planning areas, the central city was designated as an "area nursing home center" while smaller facilities located in smaller towns are classified as "community nursing homes." Funds for new construction are not allocated on a strictly local need basis; but the adjusted beds per population ratio for the planning area involved is a factor in determining if a particular nursing home is needed or not.

5) Chronic, mental and tuberculosis facilities service area plan. All of these long-term treatment centers are also planned on a state-wide basis according to the same hospital and medical facility areas previously discussed. Using the U. S. Public Health Service recommendation that five beds for nervous and mental patients are needed for every 1,000 persons, 62 per cent of Georgia's need has already been met. However, all but 4 per cent of the state's total number of beds is located in one institution at Milledgeville.

The planning process in this instance primarily involved the distribution of unmet bed needs to the nine major planning areas. With regard to the preferred type and location of mental facilities that are eligible for aid, Georgia's Division of Hospital Services has strongly indicated that first priority will be given to the construction of psychiatric units in teaching hospitals. This policy is designed to provide trained personnel for local facilities in the future.

Georgia's chronic bed need is estimated on the basis of two beds per thousand population. Accordingly, a large chronic hospital has been planned for each of the nine central cities

around which the hospital and medical facility planning areas have been developed. As for project priority, the following statement seems to clearly represent the Division's policy: "An independent chronic disease hospital may be considered only when there is no practical way to integrate the chronic facility with a general hospital; however, any such independent chronic hospitals should be located as near as possible to general hospitals and should emphasize the rehabilitation of patients." (13)

Tuberculosis facilities are barely mentioned in the state hospital plan. In fact, any project involving this type of installation is restricted to the nine primary cities, and first priority is given to proposals submitted by existing general hospitals.

6) Public health center service area plan. The sixth and final unit of Georgia's comprehensive plan for hospitals and medical facilities covers public health center locations, both existing and proposed.

In dividing the state into 38 health districts for planning and service purposes, consideration has been given to transportation, communication facilities, and the area and population of each district. For the most part, the total population of the multi-county districts is approximately 70,000. The long range plan calls for a public health center to be constructed in each health district, usually in the county with the largest population. An auxiliary center is planned for each of the other counties in the district.

Although the bulk of regional medical facility planning has been executed by governmental health agencies, there is at least one instance of a privately inspired regional program. The United Mine Workers (UMW) Union is in the process of building and developing a chain of hospitals to serve certain portions of the Kentucky-West Virginia-Pennsylvania coal mining region. The UMW scheme also involves a pattern of integrating hospital services based on an association of smaller, outlying hospitals with larger general care type institutions.

Urban planning.---Considering the relatively complete organization of

medical facilities on a regional basis, it would seem likely to expect a similar situation to exist in cities and metropolitan areas. Unfortunately, such is not the case.

The complexity and rapidity of change in our post war urban environments has produced a variety of problems that have required immediate and continuous attention. Expanding population and school needs, increasing traffic congestion, utility demands in fast growing suburbs, industrial development--these and other factors have occupied the time and energy of most urban planners and municipal officials. As such, the almost overnight development of the hospital business into this country's fifth largest industry has virtually gone unnoticed, and therefore unplanned for, in many of our cities.

Traditionally, the standard urban planning procedure with respect to hospitals, nursing homes, health centers, etc., has been simply to regulate their location through the medium of zoning ordinance provisions (see Chapter III). Other than a few notable exceptions, such as the recently planned Chicago Medical Center District and a 1953 Planning Advisory Service report, few efforts have been made to analyze or plan for the changing function of medical facilities relative to over-all community development needs. This situation apparently stems from the usual practice of relegating these facilities to catch-all land use categories variously designated as "institutional" or "public and semi-public." Under these classifications, the assumption is often made that each use included therein has special needs and must be planned for on an individual basis.

Although this assumption is still somewhat valid, the current

tendency to consolidate, coordinate and standardize medical service units is producing conditions which are far different in nature than those which existed when hospitals and similar institutions were independent entities. Thus, it seems apparent that a fresh outlook should be taken by planners in considering the position and function of medical facilities in the city plan.

Site planning.--The development and growth of multi-unit medical complexes which require large areas of land has generated a real need for competent site planning. A contemporary teaching hospital center, for example, will probably have nursing and medical schools; separate dormitories for resident physicians, internes, and nurses; recreation facilities; and several other elements in addition to the main hospital. Its over-all character will be similar to that of a university or college campus.

Circulation, accessibility, convenience, parking provisions and the relationships between various units are all-important in promoting an efficient and pleasant environment. In recognition of this fact, some of the larger medical centers now maintain full time site planning staffs to prepare and periodically revise their "master plan" of development.

If current trends and observations are any gauge, hospital site planners may have to correlate an even more complex assemblage of units in the future. Chapter IV contains a fuller treatment of this subject.

Building or unit planning.--Of course, the fourth level of planning involves the arrangement and design of the actual building or buildings to be used for medical research, teaching, treatment or convalescent purposes. This type of planning is normally performed by licensed architects.

Due to very special needs insofar as patients, equipment and organization are concerned, health facilities usually are designed from as functional a standpoint as possible. Consequently, their actual shape and size are greatly affected by changes in economic and social conditions, as well as by advances in medical technology. Several present-day building trends are illustrative of this point. For instance, the rise in federal income tax rates over the past thirty years--especially in the higher brackets--has seriously affected hospitals accustomed to and dependent upon bequests and other philanthropic sources of revenue. This factor, combined with the higher cost of modern equipment and facilities, has forced many institutions to remodel or add to their existing plant in place of building new quarters.

Also, patients now expect a greater degree of service than ever before and they show a decided preference for private and semi-private accommodations. The fact that hospital space needs per bed have almost doubled since 1937 is reflective of this tendency. Because of high urban land costs and for reasons of economy, hospitals often are designed as large, multi-storied units. However, there is a growing clamor on the part of hospital administrators and other authorities to get away from this impersonal "warehousing" of patients. In the opinion of one expert, speaking particularly of mental institutions:

The hospital building should not dwarf the individual by its size and by herding patients together in thousands of giant monoblock buildings . . . no hospital should contain more than 1 1000 patients. . . . new hospitals should be designed to become obsolete in twenty or thirty years and their interior walls should be movable. The hospital should be composed of several small buildings, not of a single large building. (13)

In evaluation, it may fairly be said that the design of medical service units generally reflects the many trends and developments

that are now occurring. The most flagrant exception to this statement is the nursing home type of facility, which is too often housed in an unsafe and unsuitable converted structure.

CHAPTER II

PLANNED GROUP DEVELOPMENTS AND SPECIAL ZONING DISTRICTS

General Considerations

It has been stated that an urban community's physical plan for its future development should strive to "create the most appropriate utilization of space and the most efficient arrangement of services in order to insure the greatest economy practicable in time and movement, the preservation of property values and assets, and a full realization of the advantages and benefits of urban life." (14)

If these commendable (but elusive) objectives are to be attained in whole or in part, the physical portion of a community development plan must be based to a large extent upon the interrelationships that exist between various land uses. To be really effective, the development plan should seek to: (1) bring together those uses which are compatible and complementary; and (2) separate those which are incompatible or unable to coexist in harmony. City planners have found that the task of determining which land uses are compatible and which ones are incompatible has been a relatively routine procedure in the past. This condition grew out of the fact that early zoning ordinances of some 30 to 40 years ago usually established but three types of urban land use categories--residential, commercial and industrial. Under this limited classification system each category was considered to be relatively incompatible with respect to the other two, and little mixing was permitted.

Although these three divisions are still basic to contemporary

"master plans" and zoning ordinances, many innovations and refinements have been developed in recent years. As a result, the current-day process of evaluating land use compatibility is much more complex than was formerly the case.

Now, it is not unusual to find that convenience shopping centers are often located on sites adjacent to new, single-family residential districts. Before World War II, almost all local business areas were "four-corner" street intersection developments in general commercial or apartment type zones. Of perhaps greater contrast, the new look of modern industry has made certain factory and warehouse uses good neighbors, even to low-density residential areas in some cases. Attractive, one-story building designs, adequate parking and loading facilities, extensive landscaping, and special noise, odor and smoke-abatement control measures have all but eliminated many formerly objectionable characteristics of industry.

However, these and other transformations which have taken place through the years as aftermaths of technological, social or economic advances are only partly responsible for the current interest in use compatibility. The growing incidence and popularity of group development schemes have furnished conclusive evidence that community, as well as individual, advantages can be derived by bringing together related and complementary land uses in a planned fashion. As a consequence, planners are now utilizing such developments as shopping centers, organized industrial districts, and large medical unit complexes to actually influence the growth pattern of cities and metropolitan areas.

In order to emphasize the full significance of this comparatively

new land planning technique, an analysis of the manner in which urban spatial patterns have been altered so as to permit, and even require, large scale group developments is outlined in the section that follows. The principal characteristics of the more important development types are also described and discussed.

Group Development in Urban Areas

The concept that compatible land uses generally function much better whenever it is possible to group them together is not unique, but the idea of guiding urban growth patterns through the judicious placement of such groupings is of recent origin.

Apparently, the manner in which our cities usually grew and developed prior to the present "automobile age" literally precluded the establishment of large land projects in built-up areas. To elaborate, the methods used to circulate people and goods in and about urban type environments have always been important developmental factors. As long as the horse drawn buggy represented the only practical conveyance for urban dwellers, the size of most cities was generally limited to about twenty square miles, or the area included within a circle having a radius of between two and three miles. This was considered to be the maximum distance within which daily commuting was feasible for a majority of the people. Later transportation mediums such as street cars, railroads, and rapid transit lines extended the commuting radius to five miles, thus permitting urban areas to encompass almost four times as much space. Today, the automobile has enabled metropolitan areas to cover upwards of 2,000 square miles, while commuting distances of 25 miles or

more are not only possible--they are rapidly becoming commonplace (15).

Of course, when most American cities were compact and limited in area, urban land was divided into smaller parcels in an effort to accommodate the maximum number of uses. This practice necessarily precluded large scale group developments in built-up places, since the need for many small units within walking distance of each other was much more important.

The situation was little changed by the introduction of rail type vehicles, even though the possible size of urban communities was quadrupled. As the new and faster commuting facilities made it practicable for thousands to work downtown and live in the suburbs, cities tended to expand vertically at the center and horizontally in a star-shaped fashion along major lines of transportation. The competition for space in the vicinity of fixed freight and transit routes, as well as in the central business district, made the assemblage of enough suitably located land for group development purposes uneconomic and impractical in most urban areas as late as 1925.

Within the three decades or so which have elapsed since that time, the amazing growth of automobile and truck usage has enabled cities to "fill in the voids," and once more become fully rounded entities as they were in horse and buggy days. The feasible size of urban communities is now such as to provide parcels of readily available land in suburban areas for almost any type of large-scale development. Moreover, urban renewal projects have provided planners with an opportunity to demonstrate that planned, unified areas offer definite economic, social and aesthetic advantages in downtown, as well as outlying districts.

As a result of these meaningful happenings, at least four types of group developments--shopping centers, planned industrial districts, civic centers, and educational institutions--are now helping to mold the future (as well as the present) shape of our urban communities. Although the needs of all four are somewhat similar insofar as land, parking, access and internal circulation provisions are concerned, marked differences do exist with regard to the intent and nature of each grouping. Therefore, individual sketch descriptions are included at this point to underscore these variations.

Shopping centers.--The most prevalent type of compatible land-use development on the American scene today is the planned shopping center. Virtually every modern city with a population of 10,000 or more is served by at least one of these versatile and attractive commercial areas.

Originally conceived to solve traffic and congestion problems intrinsic to conventional neighborhood business districts, the concept of grouping independent stores on a single site to operate as a cohesive unit has been broadened and utilized beyond the fondest dreams of its early supporters. In fact, many of the characteristics of planned shopping centers are now being emulated in central business districts, as these areas struggle to regain sales dollars lost to their glamorous suburban counterparts.

Exhibiting a striking similarity to hospital classification systems, shopping centers are also categorized according to their size and the type of service (or merchandise) they offer. The small neighborhood shopping center, for instance, is planned to supply convenience goods through such primary outlets as a food market, a drug store, a cleaning establishment and other shops providing for daily needs. The larger

community shopping center, serving a greater population than just one neighborhood, usually contains barber and beauty shops; hardware, clothing, appliance and small furniture stores; and an occasional restaurant--along with such stores as those listed above that furnish convenience goods. The regional shopping center is still greater in size and **scope**, as it generally includes at least one department store in addition to the convenience and specialty shops found in the smaller centers. The variety and depth of merchandise offered by regional shopping developments frequently attracts customers from a very large area. However, if they are to be successfully operated, regional centers must be readily accessible to densely populated nearby residential sections.

All three types of planned shopping centers have the following characteristics in common:

- 1) Since they very definitely cater to automobile-borne patrons, shopping centers must provide adequate off-street parking facilities. This usually means that large sites are required, but some centers (such as Parkington in Arlington, Virginia) utilize multi-level parking garages to reduce land needs.
- 2) Regardless of size, well-planned shopping centers exhibit the advantages and benefits of integrated architectural design. A unified physical appearance, conveniently arranged stores, adequate truck service provisions, and a pleasant atmosphere for both shoppers and merchants are but a few of the dividends obtainable through such design.

By virtue of their organization on a group basis, shopping center tenants are able to stage joint promotional campaigns; mutually provide for the maintenance of buildings and grounds; and otherwise

act as a unit to protect as well as enhance their investments.

Features such as these have enabled planned shopping centers to better cope with the complexities generated by the automobile age than any other kind of area developed for business uses. Their utilization has been so extensive that the location of existing or proposed centers is now an extremely important factor to persons searching for suburban homesites; to merchants interested in establishing branch outlets; to realtors seeking land for subdivision purposes; and of course, to urban officials striving to promote more efficient and more effective developmental patterns.

Planned industrial districts.--An organized or planned industrial district has been defined as "a tract of land which is subdivided and developed according to a comprehensive plan for the use of a community of industries, with streets, rail lead tracts, and utilities installed before sites are sold (or leased) to prospective occupants." (16) In short, these districts are simply planned industrial subdivisions.

Comparatively rare before 1940, the organized industrial district has come into its own, so to speak, in the last ten to fifteen years. Industrial real estate firms, building contractors, and railroad corporations have been the chief sponsors of this type of group project in the past. However, an increasing number of cities and counties also are now promoting the establishment of planned industrial districts.

Whereas the private developers are more concerned with land, building or freight profits, governmental bodies normally use these districts to: (1) attract new sources of employment and thereby broaden the local

economic base; (2) better control the nature and character of industrial expansion, especially with regard to nearby residential and commercial areas; and (3) eliminate or reduce unnecessary costs that are incurred when utilities and other urban services have to be extended to a number of widely scattered industrial sites, instead of to a few, well-located group developments.

In much the same manner as shopping center proprietors, industrial district tenants are able to take advantage of certain benefits that become feasible only when compatible industrial uses are grouped together according to a pre-arranged plan. These benefits include: (1) enough space to meet present and future needs; (2) proper design and landscaping; (3) private covenants to protect investments; (4) convenient as well as adequate service, utility and transportation provisions; and (5) the possibility of acting as a group when such action is necessary.

Of course, shopping centers and industrial districts differ considerably in many respects. For instance, the average planned industrial complex generally contains 400 to 500 acres, while even the largest shopping centers seldom exceed 100 acres in size. Also, the usual practice of housing shopping center units in one, or a few buildings, on a single site is not followed in planning for industrial districts. The latter are arranged to accommodate a variety of plants, warehouses and possibly truck terminals on separate parcels of land, all of which are part of a unified, large-scale development. Furthermore, the success or failure of a given shopping center hinges to a great extent upon the ability of its chief drawing card (i.e., a supermarket or department

store) to attract customers; whereas each element in an industrial district must rise or fall on its own merits.

It should be pointed out that planned districts for industrial uses generally produce overall community benefits that are of greater importance than those gained by industry proper. Certainly, such urban sprawl problems as lengthy commuting distances, excessive traffic circulation, and expensive utility extensions are easier to neutralize or control if centers of employment are grouped together in a few strategic locations. In addition, surrounding land values may well be increased by the establishment and subsequent operation of attractive, well-managed industrial districts, even in nearby, highly restricted single family zones. This latter benefit is particularly significant since house and land values usually tend to decline when industrial plants are indiscriminately located adjacent to residential areas.

Civic centers.--A third type of group development often found in American cities is the familiar civic center. Much older in conception than either shopping centers or industrial districts, civic centers have experienced an interesting history of change and development since they became popular shortly before the 19th century drew to a close.

The first significant movement to group public buildings in centrally located, planned areas apparently was ignited by the Chicago Exhibition of 1893. Displaying in planned groups what were then the latest in architectural building styles, the Exhibition drew thousands of visitors from all parts of the United States, many of whom were deeply impressed by the stately manner in which the various units were

laid out on the site.* When they returned home, community leaders who had been to the Exhibition inevitably contrasted the order and neatness so noticeable at Chicago with the disorganized, unattractive conditions that prevailed in most of their own cities. These critical appraisals usually resulted in the establishment of community beautification programs based on the principles of physical planning.

Nation wide in scope, this so-called "city beautiful" movement rapidly gained momentum which carried it well into the 20th century. Civic centers, planned parks, and smaller beautified areas were the most common expressions of this crusade to produce a more pleasant urban environment. Such public buildings as city halls, county courthouses, libraries, museums, art galleries and municipal auditoriums were grouped together in early civic center developments, almost all of which were located within or adjacent to the central business district.

Now, after 50 to 60 years of refinement, contemporary civic centers differ considerably from their predecessors. The more usual practice today is to separate public buildings that house cultural activities from those designed for governmental operations. This functional separation has evidently taken place for at least two reasons. First, the magnitude and variety of urban services currently provided and administered as a function of government require a large labor force, and a considerable amount of record keeping as well as work space. To

*Executed by a team of architects, landscape architects, and sculptors, the arrangement of buildings was heavily influenced by the traditional European concept that public edifices should be harmoniously grouped together to signify local or state civic interests and cultural attainments.

meet these needs, a number of auxiliary land uses such as office buildings, parking areas, and employee service facilities have to be located near the actual centers of government, that is, the city hall, the county court house or the state capitol.

Secondly, there is and has been a definite tendency to decentralize cultural activities by developing suburban libraries, little theatres, recreation centers, and the like. Insofar as governmental units are concerned, however, the trend is quite the reverse. The degree of interaction that now exists between federal, state and local officials and agencies is so great that all three governments are finding it convenient to locate their respective buildings in the same general area, much as banking, insurance and similar uses naturally group together in the downtown business district.

To sum up, the typical civic center of today is more likely to be a government or administrative center than anything else. Instead of being designed simply as a beautiful complex of community buildings, these civic or government centers are planned to facilitate communication, circulation and interaction between the various units. This type of group development can also be expected to grow in future importance as governmental activities and services are extended in our urban communities.

Educational institutions.--The college or university campus represents another kind of compatible use group that is frequently located in an urban setting. Unlike the business, industrial and civic developments just described, the educational campus almost always contains more than one variety of land use. Often, the campus area actually functions as a

relatively complete and independent community, since residential, commercial and even industrial uses may be included within the property limits or adjacent to it.

Virtually every major American college or university now situated in a large city has been in existence for several decades. Like civic centers, these institutional groupings have also experienced changes relative to their mode of operation as a result of 20th century transportation, economic and social trends. To illustrate and discuss these changes, urban colleges and universities are best separated into two broad classifications as follows:

1) Downtown Institutions

Generally located within or near the central business district, "downtown" educational plants for higher learning cater to night school, business and technical students who live at home and commute to class. Many of these institutions initially housed their operations in a series of converted, scattered buildings originally designed for commercial purposes. In the past, schools of this type seldom have been able to provide any facilities for athletic events, student housing or social activities. Their "campus" area consisted of the nearby streets and sidewalks furnished by the city.

Today, an increasing number of downtown educational institutions have found it necessary to:

- (1) construct new buildings to meet modern educational standards;
- (2) supply parking space for automobile commuting students; and
- (3) provide open campus areas for student and faculty use.

Wayne State University in Detroit is a notable example of a downtown school that has gone so far as to develop full educational, cultural and athletic facilities in compliance with a comprehensive campus master plan. Of course, land parcels of the size needed for a large campus are rarely available in major business areas, and when they are, their cost is prohibitive. This condition often stymies downtown institutions wishing to expand or redevelop. Urban renewal projects (where feasible) may be used to solve these land and finance problems in some cases.

2) Outlying Institutions

The designation "outlying" more aptly refers to past instead of present conditions with respect to this type of educational institution. Such schools as the University of Kentucky in Lexington; Georgia Tech in Atlanta; Fordham University in New York City; the University of Detroit in Michigan; and scores of similar institutions throughout the country were originally located in outlying fringe areas where land was cheap and plentiful. Now, with few exceptions, the combination of municipal expansion and suburban build-up over the years has completely enveloped these educational centers.

While better and more extensive services have become available to suburban schools as a result of this urban growth, badly needed nearby expansion room has all but disappeared. This land shortage has created a serious problem for outlying institutions, since they draw students from a much wider region than their downtown counterparts and are thus obligated to furnish a number of special facilities. Individually and collectively, modern dormitories, student activity centers, gymnasiums, laundries, classrooms, laboratories, and administrative offices all require a great deal of space--to say nothing of the open areas that must be provided to maintain and promote a pleasant campus environment.

The overall job of integrating space and elements has become so complex that some of our larger institutions now maintain full time professional staff to take care of current as well as long range planning needs. The University of California at Berkeley is a leading exponent and practitioner of this approach.

City planners must certainly be concerned with the development problems of urban colleges and universities as described above. Nevertheless, a significant and growing trend promises to be of even greater importance. The national demand for higher education is being answered in part by a relatively new facility, the junior college. Although smaller in size and scope, these schools naturally exhibit many of the same characteristics as the larger institutions. For example, most

junior colleges are located in an urban environment; they directly influence surrounding or nearby growth and land use patterns; and they usually have complex and comprehensive site needs.

Thus far, Michigan, California, New York and Florida have already started to develop state-wide or regional junior college systems. Other states are expected to follow their lead. In the future, almost every city of any size will probably contain one or more of these two-year, publicly supported schools. Not unexpectedly--in view of their rapid rise to prominence--a major void remains to be filled on the urban level with respect to junior college planning criteria. Just as in planning for hospitals, research studies should be conducted right now, if cities are to utilize these new educational centers in a positive way relative to community development patterns.

Special District Zoning

Two separate and distinct procedures are normally employed in planning for compatible land uses. The first approach is to pre-plan for specific group developments such as those outlined and discussed in the preceding section, while the second method is to utilize special zoning districts. As pointed out, the chief objective of the first approach is simply to group together certain related land uses through the medium of a comprehensive site plan in an effort to produce mutual benefits. These benefits may include sufficient room for present and future needs; convenience of access and circulation; adequate parking space; and the advantages of integrated architecture, among other things.

The other procedure often used to promote the grouping of compatible land uses in a specific area is the inclusion of special district provisions in a zoning ordinance. This device of identifying a portion of the community as being "special" in character or nature has received wide recognition and use in the last twenty years. An informational report published by the Planning Advisory Service (PAS) in 1952 lists three primary reasons for this zoning trend (17). In essence, these reasons are:

- 1) Since every community has certain unique characteristics, it may be necessary to establish a special and perhaps unconventional district to meet a particular need. As a prime example, older areas which have an historical significance are often declared to be "historic zones" by cities to protect and preserve such sections from change or intrusion by inharmonious uses.
- 2) Time-honored methods of separating urban land uses are undergoing modification in at least two ways. In the first place, there is a growing realization that transitional areas are needed in many cases to soften or ease the conversion from one major type of land use to another in the vicinity of a zone boundary. Parking lots are sometimes used in this capacity to separate commercial and residential areas in a more harmonious manner than might be possible if transitional zones were not permitted. Secondly, the distinction between residential, commercial and industrial uses, based on nuisance and density characteristics, is not so clear and distinct as originally believed. This realization has prompted some communities to establish "hybrid" district provisions in their ordinances. Examples include districts variously designated as office-professional, institutional or commercial-manufacturing. In each district of this nature, permitted uses are gauged more on their ability to co-exist in harmony (i.e., be compatible), than on their character relative to being residential, commercial or industrial.
- 3) The growing frequency of large-scale planned developments in urban areas has also been a major factor in making special district provisions

popular. In addition to the four groups mentioned in this chapter, group housing developments have also been declared as special districts in some instances.

There is, of course, little difference in the two procedures whenever a particular planned group development is specified as a special zoning district. However, the latter term is more generally used to designate areas in which certain compatible uses are located (or tend to locate) because of a natural desire to be near one another for reasons based on economic, social or convenience factors--and not as a result of any pre-planned scheme of development. In order to better understand the manner in which the above terms are used in actual practice, a few representative zoning ordinance provisions have been selected to help clarify this point.

For example, one of the special districts included in the proposed revision of the Bristol, Tennessee, Zoning Ordinance (June, 1957) was called an O-I or Office and Institution District. As stated in Section 6-5 of the ordinance, the intent of this district is "to encourage the development of homogeneous areas composed of medical and related uses and to protect these areas from the intrusion of incompatible uses". Within the O-I district, the following uses are allowed:

1. Any use permitted in an R-H (Residential Estates) District with the exception of cemeteries.
2. Two-family and multi-family residences.
3. Medical and dental clinics.
4. Clinical laboratories.
5. Nurses' homes.

6. Nursing homes.
7. Professional offices or studios of a
 - a) chiropractor
 - b) dentist
 - c) masseur
 - d) optometrist
 - e) osteopath
 - f) physician.
8. Drug stores.
9. Parking lots.
10. Signs advertising uses conducted on the lot, provided such signs are not illuminated and do not exceed six (6) square feet in area.

Now, contrast the above with the list of permitted uses included in the Institutional (I-N) District provisions of the August, 1956, Gainesville, Georgia, Zoning Ordinance:

- a. All uses permitted in a Residence II District.
- b. Hospitals for humans.
- c. Schools, including colleges and universities.
- d. Nursery schools or kindergartens.
- e. Sorority or fraternity houses.
- f. Florist shops.
- g. Drug stores.
- h. Offices or clinics for medical or dental practice.
- i. Clinical laboratories.
- j. Any other activity which is customarily considered as being accessory to a hospital, school, college or university.
- k. Antique shops.
- l. Churches and fraternal organizations.

Of course, the Bristol ordinance refers to a more restricted type of institutional district than does its counterpart in Gainesville. Whereas the latter is designed for more than one kind of institution, the former is a direct attempt to permit various kinds of medical facilities to locate in the same general area with residences and certain commercial uses usually associated with hospitals, although the latter are not even included on the list of permitted uses.

A less inclusive kind of special district is provided for in the Mt. Lebanon Township, Pennsylvania, Zoning Ordinance, which was amended in 1951 to permit the creation of "Neighborhood Shopping Districts". Uses sanctioned in this particular zone are shops for the sale of books, confections, bakery, foodstuffs, dairy products, dry goods, notions, novelties, periodicals, household articles and tobacco; service establishments such as barber shops, beauty parlors, business and professional offices, banks and savings and loan associations, laundry and cleaning agencies, shoe repair shops; and recreation uses, such as bowling alleys and theaters.

Among other regulations listed for this district, the ordinance stipulates that "the location, site plan and general character of the development be approved by the Board of Township Commissioners". Obviously, this last statement indicates that a planned shopping center development would be classified as a "Neighborhood Shopping District" zone by the terms of this ordinance.

Thus, we may now say that planned group developments are sometimes designated as special districts, independent of other zones; or, they may be elements in a much more inclusive zoning district. In other words,

a planned development is a form of special district, but the latter term does not necessarily refer to a pre-planned grouping of compatible grouping of compatible land uses.

One final characteristic of the current tendency to utilize special district zone classifications should be mentioned. As might be expected, some communities may over-use this technique. A case in point is the 1953 Riverside, California, Zoning Ordinance which contains provisions for 24 separate districts. Of these 24 zones, three are for industry; five are residential; two are business-commercial; one is for agricultural areas; and the other 13 are special districts that carry the following titles:

<u>Zone Number</u>	<u>Official Designation</u>
B-3	School, Hospital and Institution Districts
B-4	Cemetery Zone
B-5	Radio Broadcasting District
B-6	Nursery Zone (plant, tree and shrub establishments)
B-7	Airports
B-8	Office District
B-9	On-Site Automobile Parking District
B-10	Service Station District
B-11	Non-Institutional Day Nursery, Nursery School and Day Care Home
B-12	Motel-Hotel District
C-2	Church District
C-3	Club District
X	Commercial Chicken Raising District

Naturally, few communities will use special districts to this extreme. The danger, of course, lies in the possibility that too many areas will be detached or separated from the three basic land use classifications of residential, commercial and industrial. This condition could very well lead to a complete breakdown of the land use and land value protections afforded through zoning. Special districts can help to meet a particular need or promote a more beneficial land use arrangement, but too liberal an application of this technique may actually create confusion and an un-orderly environment.

CHAPTER III

ZONING ORDINANCE AND HOSPITAL AREA SURVEY FINDINGS

In Chapter I, the necessity and desirability of locating certain medical facilities in close proximity to general hospitals was pointed out and documented. This was followed in Chapter II by a discussion of the community and individual benefits that can be derived when compatible land uses are grouped together in a planned manner.

The next logical step, then, is to examine current as well as past efforts to develop planned medical groupings, especially those which utilize general hospitals as the principal unit of development. Such an investigation will not only turn up what has been accomplished--it should serve to spotlight what has not been done. With this type of information at hand, a reasonable approach to the problem of correlating medical trends with city planning and community needs can then be evolved for consideration and analysis.

The Zoning Ordinance Survey

Scope and intent of survey.--As mentioned previously, an exhaustive zoning ordinance survey was conducted as a basic part of the research for this study. The survey was undertaken in an effort to: (1) determine where cities permit medical facilities to locate; (2) uncover special or unique zoning provisions for hospitals, health centers, clinics, etc.; and (3) discover whether planned medical developments are provided for, or considered to any great extent, in contemporary zoning ordinances.

In all, 285 ordinances from Georgia Tech's City Planning Library

collection were selected and reviewed. Every ordinance in the collection that carried a date mark of 1950 or later was analyzed in an effort to assemble recent zoning information from as many cities and states as possible. A few pre-1950 ordinances were also included to provide representation for states not otherwise accounted for. This method of selection eliminated any bias as to whether a particular ordinance was "good" or "bad"; and it produced a cross-section of America's medical facility zoning provisions since all but four states (Alaska, Delaware, Nevada and Hawaii) were represented in the survey.

Although some of these zoning documents undoubtedly have been amended during the intervening period between the library copy date and the present, 108 of the 285 ordinances studied were enacted or considered for adoption within the last five years. All but twenty of the total number surveyed are as recent as the last eight years. The study findings are therefore reasonably representative of contemporary zoning policy across the country insofar as hospitals and other medical facilities are concerned.

The two tables that follow have been included to provide an indication of the survey's scope and geographical distribution. Table 2-a illustrates the various urban population ranges covered, while 2-b contains a state-by-state breakdown of the ordinances studied.

TABLE 2-a. Number of Zoning Ordinances Surveyed, By Size of City*

	Population Range of Cities (In thousands of Residents)						
	0-10	10-25	25-50	50-100	100-250	250-500	500-1000
No. of Ordinances Surveyed	11	71	67	52	41	21	9
							over 1 million
							5

* Eight counties were also included.

TABLE 2-b. Number of Zoning Ordinances Surveyed, By State* & Region

Region	State	Number of Ordinances	Region	State	Number of Ordinances
New England	Connecticut	10	South-east	Florida	8
	Maine	3		Georgia	15
	Massachusetts	13		Kentucky	5
	New Hampshire	3		Mississippi	2
	Rhode Island	2		N. Carolina	8
	Vermont	3		S. Carolina	3
Sub Total		34		Tennessee	10
East	Dist. of Col.	1		Virginia	7
	Maryland	3		W. Virginia	1
	New Jersey	16	Sub Total		68
	New York	15	South-west	Arkansas	1
	Pennsylvania	10		Louisiana	3
Sub Total		45		Oklahoma	2
North	Illinois	9		Texas	9
	Indiana	5	Sub Total		15
Central	Michigan	17	Rocky	Arizona	1
	Ohio	10		Colorado	2
	Wisconsin	7	Mountain	Idaho	2
	Sub Total	48		Montana	2
Midwest	Iowa	3		New Mexico	2
	Kansas	4		Utah	2
	Minnesota	3		Wyoming	1
	Missouri	5	Sub Total		12
	Nebraska	3	Far West	California	34
	N. Dakota	3		Oregon	4
	S. Dakota	1		Washington	3
Sub Total		22	Sub Total		41
South	Alabama	9	U.S. Total		285

*Alaska, Delaware, Nevada and Hawaii not represented

Hospital zone locations.---An answer to the question of where hospitals are now permitted to locate in cities represented one of the important objectives of the zoning survey. Consequently, each ordinance was checked to ascertain the highest or most restricted zone in which a hospital could be built. The results were quite revealing, as shown by Table 3.

Table 3. Zone Locations For Hospital In Urban and Suburban Areas

	Highest Permitted Zone*						By Special Permission In Any Zone
	Residential				Business		
	One Family	Two Family	Apart- ment	** Other	CBD	Other	
No. of Ordinances	73	46	49	33			30
% of total Surveyed	26	16	17	12			11

*Six ordinances had special provisions and 27 did not mention hospitals at all.

**Usually designated as agricultural, greenbelt or suburban estates district.

Somewhat surprisingly, 26 per cent of all the ordinances reviewed list hospitals as a permitted use in what is usually considered to be the most highly restricted zone of all--that is, the one-family residential area. However, an extremely important qualification must be made. Of the 73 ordinances allowing hospitals in their highest district, 41 or 56 per cent sanction such a location only through some form of special permission. This locational approval is occasionally granted by a zoning board of appeals as a special exception, but the more usual procedure involves a zoning device known as a conditional use permit. Frequently utilized where specialized land uses are concerned, special permits are issued by an officially designated body such as a planning commission, an aldermanic board, or a city council. Advocates of these conditional permits staunchly maintain their usage enables special cases to be studied and judged on an individual basis. Opponents of use permits are wary of the fact that a group of men subject to personal and

political influences have the power to determine who does and who does not get a permit. Under such circumstances, decisions are possible which are not always in the best interests of over-all community development.

The controversy is particularly interesting in that a city or county governing body usually relies on the advice of its consulting or resident planner whenever the possibility of including use permit provisions in the local zoning ordinance is under consideration. Thus, the difference of opinion would seem to lie with the professional planners more than with the elected officials, although there are certainly cases where the latter insist upon being delegated the power to issue special permits for certain uses.

Not unexpectedly, individual areas vary considerably in their usage of special permits for hospitals. Whereas 28 of the 34 California ordinances studied require such permits, only 2 out of 10 from Connecticut and 5 of 15 from New York contained any mention of them. Regionally, the differences are not quite as extreme. This is illustrated in Table 4.

TABLE 4. The Use of Special Permits to Govern Hospital Locations, By Region

Region	Total Number of Ordinances Surveyed	Number of Ordinances Utilizing Special Permits for Hospitals	% of Total
New England	34	17	50
East	45	20	44
North Central	48	22	46
Midwest	22	10	45
South	68	37	54
Southwest	15	10	67
Rocky Mountain	12	5	42
Far West	41	30	73
United States	285	151	53

These figures clearly imply that planners throughout the country are divided about equally as to their belief or disbelief in the controversial use permit--at least where hospitals are concerned. This schism points up the need for some up-to-date research and re-thinking on the whole subject of special permits, not only for hospitals, but for other uses as well.

Special-care institutions.--In addition to indicating where hospitals per se are permitted in urban areas, the zoning survey turned up a number of findings related to institutions specializing in the care of contagious disease, narcotic, tubercular, epileptic, or mental patients. The results are encouraging in some ways and discouraging in others. For example, only a few ordinances bothered to mention contagious disease hospitals. This is a good sign that most cities now realize the control of epidemics is best effected by isolating afflicted persons, rather than by segregating buildings in which these persons are housed for treatment.

Actually, with the exception of mental institutions, a very small number of the many ordinances studied even referred to special hospitals. Of those that considered such reference necessary, the provisions shown below are perhaps the most interesting.

Name of City	Date of Zoning Ordinance*	Special Hospital Provision
Lubbock, Texas	1952	Prohibits the location of hospitals for TB, narcotic or alcoholic patients in apartment zone; but permits them in districts which primarily contain industrial land uses.
Charleston, W. Va.	1954	Permits hospitals in residential zone, but prohibits institutions treating narcotic, alcoholic or epileptic patients.

*or of last recorded amendment

Name of City	Date of Zoning Ordinance	Special Hospital Provision
Richmond, Virginia	1951	Same as Charleston except hospitals for unwed mothers are also excluded.
Salt Lake City, Utah	1952	Institutions for "sub-normals" are admitted to B residential district (where hospitals are permitted by right) only if they are located not less than 600 feet from any type of dwelling.
Coral Gables, Florida	1952	Crippled children's hospital requires a special use permit.

Cities that require special permits for all hospitals presumably use this process to guard against the intrusion of "undesirable" institutions; i.e., those which produce psychological or sociological apprehensions due to the nature of their operation. Even so, the general public's attitude toward mental hospitals often results in additional protective measures being included in the zoning ordinance. This tendency is pretty well borne out by the fact that 114 of the 285 ordinances surveyed prohibited mental institutions in zones where other hospitals were allowed. In all of these cases, there was no indication that independent mental facilities were permitted anywhere else within the corporate limits involved.

Another 104 ordinances did not mention mental institutions in any way; 32 others fell back on use permits exclusively; and only 35 specifically designated a zone wherein mental hospitals could be located. The latter group exhibited very little unanimity of opinion, as illustrated by the following list of typical provisions:

City or County	Date of Zoning Ordinance*	Designated Zones For Mental Institutions
Oceanside, Calif.	1952	A-1 (agricultural)
Orange Co., Calif.	1952	RA (roadside agriculture); or A-1 (agricultural)
New Britain, Conn.	1953	A (residential)
W. Hartford, Conn.	1951	I (industrial)
Jacksonville, Fla.	1954	A (business)
E. Point, Ga.	1958	T-R (transitional); by special permit only
Bloomington, Ind.	1950	B-2 (business)
Lexington and Fayette Co., Ky.	1953	A-1 (agricultural) or S-1 (subur- ban residential); by permit only
Needham, Mass.	1952	Institutional (special district)
Pittsfield, Mass.	1953	R-2 (residential)
Kalamazoo, Mich.	1953	Zone 7 (residential)
Muskegon, Mich.	1952	R-2 (residential); by permit only
Kearney, N. J.	1952	C-2 (central business district)
Clarkstown, N. Y.	1955	S-C (summer colony)
Rochester, N. Y.	1958	R-2 (residential); by permit only
Greensboro, N. C.	1956	Institutional (special district)
Lakewood, Ohio	1952	2B (commercial)
Philadelphia, Pa.	1953	D (residential)
Lubbock, Texas	1952	J (catchall manufacturing zone)

* or of last recorded amendment

The relatively small number of cities that permit mental hospitals within their borders, and the uncertainty as to where these institutions should be situated if they are admitted, is not surprising. Nevertheless, changing medical trends in the treatment of the mentally ill, as well as social and economic adjustments, are making it unnecessary and unwise to locate mental facilities anywhere other than in urban areas. It seems apparent, however, that such urban locations will not be possible unless and until a wholesale change in common zoning practice takes place.

Special medical districts.--The zoning survey proved one thing conclusively--special medical districts are extremely rare. Out of the total number reviewed, only three ordinances--New Orleans, Louisiana (1954);

Bristol, Tennessee (1957); and Wauwatosa, Wisconsin (1951)--had zones primarily designed to accommodate medical facilities. Bristol's O and I District (see p.55) and New Orleans's M-1 and M-2 Medical Service Districts are very similar in that all three include multi-family residences, drug stores, professional offices for doctors, nursing homes, clinics and parking lots on their lists of permitted uses. The fact that New Orleans allows hospitals and Bristol does not is the major difference between the two ordinances. On the other hand, Wauwatosa's A and B Institutional District regulations do not mention commercial activities, as they refer only to certain kinds of medical institutions, in addition to permitted residential area land uses.

As for planned medical units, the city of Paducah, Kentucky furnished the only ordinance surveyed that contained provisions for such a development. Section 8 of this 1953* ordinance, entitled Medical Development Unit, includes the following clauses:

(a) Land Deemed One Lot - Any parcel of land, including any interior street, which is designated as and used for medical development unit may be deemed to be one lot. To be considered a medical development unit, the parcel of land must include at least 40,000 square feet exclusive of the area of any interior public street.

(b) Definition - A medical development unit may include either hospital buildings or buildings providing professional facilities for physicians and dentists with common facilities for laboratory, x-ray, and similar ancillary services, or buildings designed to accommodate any combination of such uses, together with such related facilities and business services as are necessary and appropriate to serve the incidental needs of the physicians, dentists, employees, and patients using such unit, provided that any incidental business service shall be housed in a principal building or buildings without separate exterior public entrances.

(c) Conditions - Medical development units may be permitted in B (business), and R (residential) zones, subject to the following conditions:

*As amended to April, 1954

(1) Medical development unit buildings shall comply with the requirements of the respective zones in which they are located with reference to height, set-back distances, yards, lot coverage, and exceptions, any such medical development unit buildings in an R zone being treated as one main residential building for this purpose; provided that where, due to the unusual width of a lot, side yards having an aggregate width in excess of 30 feet would be required for a building of normal height within the zone, the aggregate side yard width need not exceed 30 feet except to the extent required as an adjustment for additional height allowable within the zone. In the case of corner lots, through lots, and lots having frontage on three or more streets, the Board may determine which yard frontage shall be deemed to be front, side and rear yards so as to make the layout of the unit conform to the subdivision pattern of property in adjacent blocks; and the Board may require that any or all such yards be treated as front yards when such treatment is deemed necessary to maintain harmony with neighborhood property.

(2) No exception shall be granted under this provision unless the Board finds as a matter of fact that adequate off-street parking space is provided within the area of the medical development unit to satisfy the reasonably anticipated needs of all persons using or employed at such unit, and the ratio of parking spaces provided to square feet of floor area shall in no event be reduced below one parking space for each 400 square feet of gross floor area thereof. Open space required to satisfy lot coverage provisions may be used for parking purposes; provided that off-street parking shall not be allowable within the areas of minimum front and side yards; provided however that parking spaces shall be allowed within the areas of minimum side yards which lie adjacent to R-4, B or M zones. The minimum side yard requirements referred to in the preceding sentence are those requirements which are expressed in a specific minimum footage as distinguished from aggregate side yard requirements which are expressed in a percentage of total lot width. Necessary approaches to off-street parking spaces shall be permitted to cross front and side yards.

(d) Application of Regulations - Where a medical development unit consists of two or more buildings to be constructed on a plot of ground not subdivided into the customary streets and lots, and which will not be so subdivided, or where the existing or contemplated street and lot layout make it impractical to apply the requirements of this ordinance to the individual building units in such medical development unit, the application of such requirements to such unit may be varied in a manner that will be in harmony with the character of the neighborhood and that will insure a standard

of open space no lower than permitted by this ordinance in the zone in which the proposed medical development unit is to be located. If the Board approves plans for a proposed medical development unit, building permits and certificates of occupancy shall be issued in conformance with such approved plans, even though the use of the land and the location of the buildings with respect to each other do not conform to the regulations for the zone in which the medical development unit is located.

Although some facets of section 8 may be overly complicated, Paducah has at least recognized that planned medical groups should be provided for in modern day zoning ordinances. This far sighted approach is particularly significant in view of the lack of such provisions in the other 284 documents reviewed.

The Hospital Area Survey

While zoning ordinances indicate where various types of land uses are permitted to locate, the actual manner in which these uses congregate together in specific locales can only be determined through field inspections. Therefore, land development patterns and other conditions in the vicinity of six urban hospital sites were noted and analyzed in some detail. Important characteristics concerning the areas are contained in Table 5:

TABLE 5. Hospital Study Area Characteristics

Name of Facility	Capacity Site Area	Ownership or Control	Type of Facility	Location	City Population*
Griffin-Spalding County Hospital	92 beds 8-9 acres	Hospital Authority	Community Hospital	Griffin Ga.	22,000
Warren A. Candler Hospital	150 beds 3 acres	Church Association	Community Hospital	Savannah Ga.	140,000
Kennestone Hospital	196 beds 8-9 acres	Hospital Authority	Community Hospital	Marietta Ga.	30,000
City Hospital	300 beds 10 acres (approx.)	City	Teaching Hospital	Columbus Ga.	100,000
Georgia Baptist Hospital	476 beds 9 acres	Church Association	Teaching Hospital	Atlanta Ga.	500,000
University Hosp. Talmadge Hospital	461 beds 800 beds 39-40 acres	U. of Ga.- State of Georgia	Teaching Medical Center	Augusta Ga.	100,000

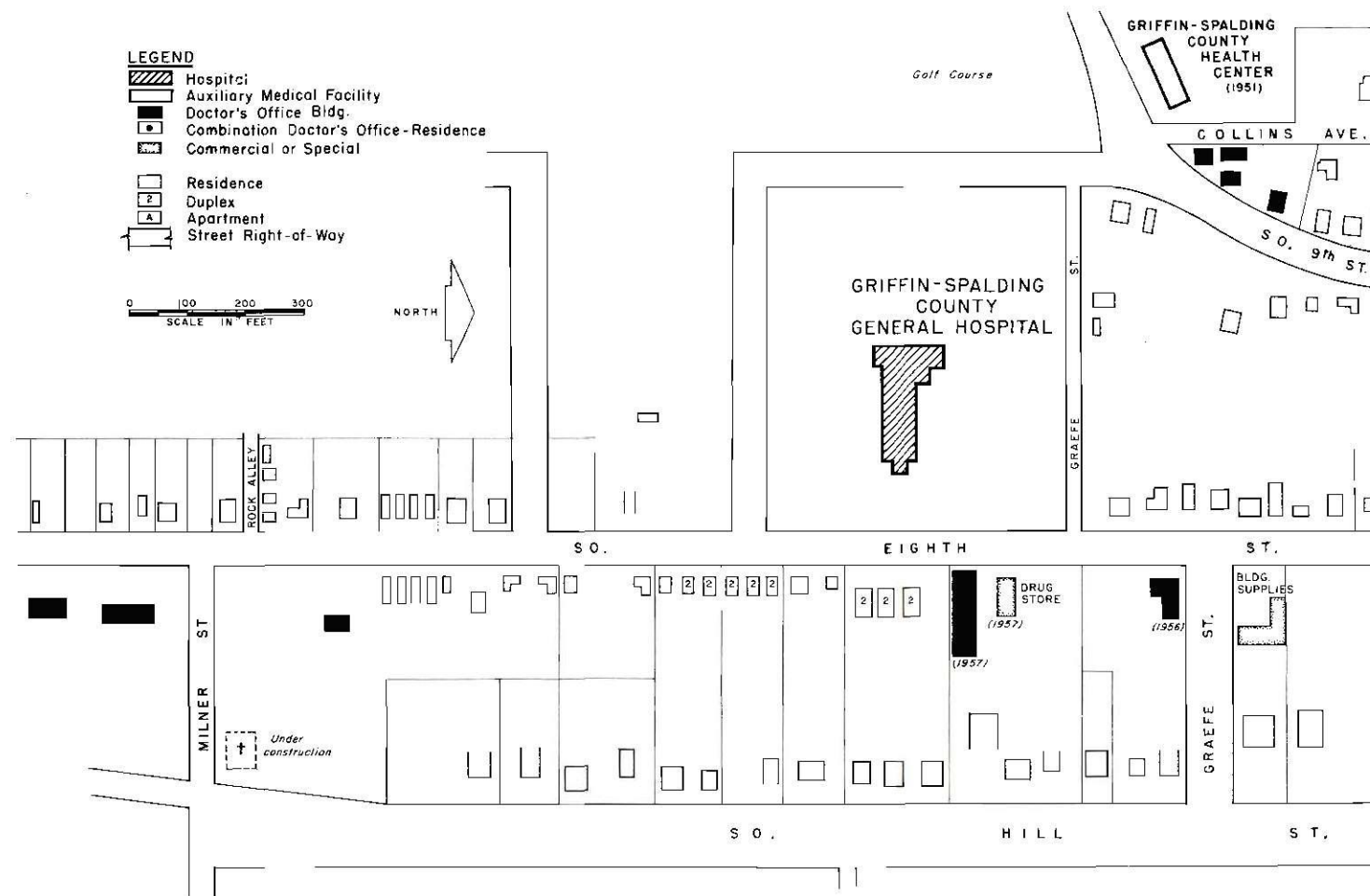
* Rounded

The six medical installations listed above were chosen for intensive study purposes for several reasons: (1) each is situated in a different kind of urban environment; (2) the hospitals involved vary considerably with respect to longevity of operation, bed capacity, ownership or control, related facilities, and type, as well as size of area served; and (3) all of the institutions are (or have been) located in such a way as to attract supporting land uses to their immediate vicinity. To illustrate and explain these considerations more fully, a short description of each study area has been keyed to a related use map. Both the description and the maps are included in the next few pages.

City and county community hospital.--Within five years after World War II ended, the City of Griffin and the County of Spalding in middle Georgia had united to build a 92 bed community general hospital. Currently undergoing expansion, this hospital provides up-to-date medical care and treatment facilities for some 60,000 persons in four rural counties. Established on an 8 acre tract of land about one mile from Griffin's central business district (see Map No. 1), the hospital grounds are bordered on the west by a golf course, and on the north, east and south by scattered residential uses. The latter are all occupied by negroes with the exception of those homes facing S. Hill Street.

Shortly after the hospital opened in 1950, the Griffin-Spalding County Health Center was erected on a nearby site. Since then, nine modern office buildings for doctors have been constructed in the area, most of them over the last three to five years. One drug store, built in 1957, is thus far the only commercial use to be attracted by the prospect of hospital generated trade dollars.

A visit to the locale of this institution is likely to leave the visitor with at least two strong impressions. First, the new \$25,000 to \$100,000 doctors' buildings are completely incompatible with the old \$1,000 to \$3,000 dwellings which lie across from or adjacent to them. Second, it is obvious that all of the newer, non-residential uses in the area would have located elsewhere (if at all), had the hospital not been stationed here in the first place. This particular case furnishes a good example of a neighborhood now in the process of being transformed to meet land and other needs directly produced by the operation and presence of a nearby general hospital.



GRiffin-SPALDING COUNTY GENERAL HOSPITAL

Bed Capacity: 92
Built: 1949-50
Area: 8 ACRES
Type of Hospital: COMMUNITY

Ownership or Control: HOSPITAL AUTHORITY
Latest Addition: UNDER CONSTRUCTION

GRiffin, GEORGIA

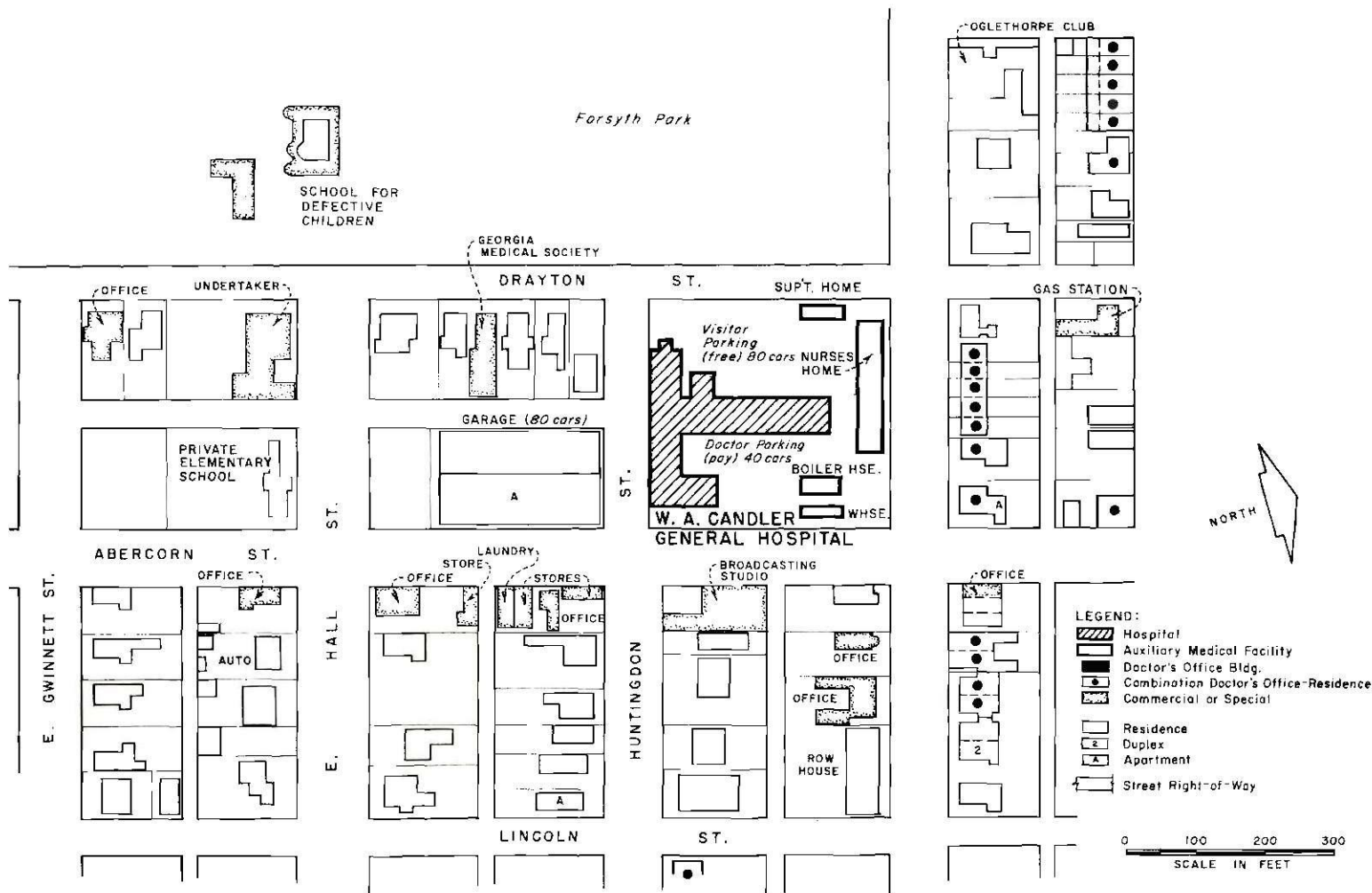
City Population: 22,000
Medical Service Area
Population: 55,900

1

Church operated community hospital.---One-hundred and forty years ago, in 1819, the seaport city of Savannah, Georgia established a municipal poor-house for the indigent sick. Today that same building is still fulfilling a useful community function, since it now is an integral part of the Warren A. Candler General Hospital, a Methodist supported and administered institution.

In joining the old with the new, Candler Hospital completed its most recent addition in 1954, bringing its capacity up to 150 beds. Although it does operate a 75 student school of nursing, this medical facility is primarily a community, rather than a teaching general hospital. Occupying less than three acres, Candler has the smallest site of the six areas studied. As Map No. 2 shows, the hospital proper, a nurses home, the superintendent's home, a few auxiliary buildings and 120 parking spaces are all located within the property limits. Furthermore, the institution can entertain little hope of acquiring any additional land. Several reasons account for this situation.

First of all, the presence of Forsyth Park directly across Drayton Street to the west rules out expansion in that direction. Secondly, there is virtually no vacant land elsewhere in the vicinity, and nearby improved property carries a prohibitive price tag. Many of the large and substantial residences near Candler are owned by doctors who have converted the houses into combination office and apartment units. Naturally, these doctor owners generally have the wherewithal, as well as the incentive, to maintain their investments to a high degree. Their actions, in turn, have served as a good example for other property owners in the area. Consequently the deterioration and obsolescence that frequently infiltrates a section



WARREN A. CANDLER GENERAL HOSPITAL

Bed Capacity: 150

Built: 1819

Area: 3 ACRES

Type of Hospital: COMMUNITY

Ownership or Control: CHURCH

Latest Addition: 1954

SAVANNAH, GEORGIA

City Population: 140,000

Medical Service Area
Population: 190,700

2

63

soon after its once-fashionable homes are converted to other uses has largely been averted in this instance. The fact that residential land values are high in the Candler neighborhood is even more significant when one considers that Savannah's central business district is less than one-half mile to the north, and slum conditions exist just three blocks away to the east.

A third deterrent to the acquisition of additional land for the hospital site is the fact that a part of what is known as "Old Savannah," an historic area is now under consideration for designation as a special zoning district. This latter factor, when combined with the currently sound housing conditions described above, eliminates the possibility that new expansion room might be made available to Candler through an urban renewal clearance project. The noticeable lack of structures designated as doctors' office buildings on this map may also be attributed to high real estate values, a shortage of suitable building space and the nearness of Savannah's central business district.

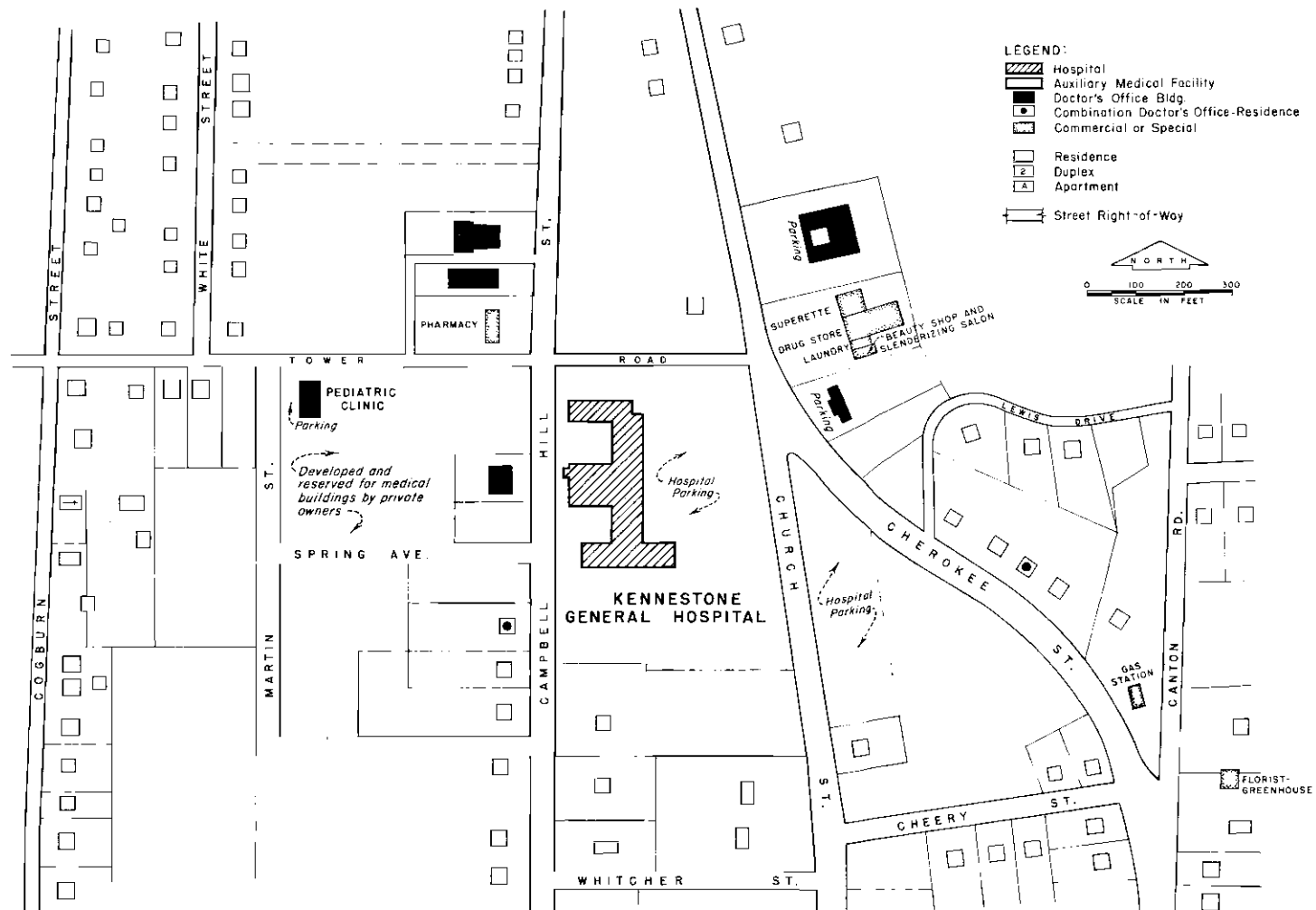
Of course, a hospital which has been located in one area for as long as the Candler facility is no longer acting to promote or direct growth patterns to any extent. However, if Candler were to be moved, the loss of its stabilizing influence would no doubt produce some changes in the existing neighborhood. For example, most of the doctors would probably move out also, permitting certain non-medical commercial and even wholesale uses to economically compete for these desirable locations.

One can only conjecture as to what the undertaking establishment stationed one block south of the hospital would do if the latter were to cease or move its operation. Planners have long been perplexed with regard

to the best location for funeral homes in the urban environment. Psychologically and socially, they are considered to be incompatible with medical treatment uses. Yet, on a strictly logical basis, it seems likely that morticians and funeral directors would seek to locate their firms as close to hospitals as possible. In any event, most cities do not permit these two divergent, but curiously complementary uses to be situated near each other.

As for other special uses in the area, the Georgia Medical Society on Drayton Street is probably the only one that has been attracted to its location by the presence of the nearby hospital. The school for defective children has no official connection with Candler; and the small collection of service and convenience stores on the east side of Abercorn Street generally receive as much or more patronage from neighborhood residents as they do from hospital personnel and visitors. In short, this venerable church operated hospital does not generate new growth as much as it stabilizes existing development. Its extended longevity of service and closeness to the downtown business area seem to be the chief factors responsible for this state of affairs.

Suburban community hospital.--Metropolitan Atlanta, like most other large urban areas in the United States, contains a number of suburban, satellite cities. One of these is Marietta, Georgia, a community of 30,000 persons situated about 22 miles northwest of Atlanta's central business district. A direct expressway-four-lane highway system connecting the two municipalities permits many Mariettans to take advantage of small-town living and big city employment, cultural and shopping opportunities. Consequently, Marietta has shared in and even exceeded Atlanta's post-war population boom.



KENNESTONE GENERAL HOSPITAL

Bed Capacity: 196

Built: 1950

Area: 9 ACRES

Type of Hospital: COMMUNITY

Ownership or Control: HOSPITAL AUTHORITY

Latest Addition: UNDER CONSTRUCTION

MARIETTA, GEORGIA

City Population: 30,000

Medical Service Area

Population: 104,000

3

99

This background information is included because of its importance to the development of Marietta's Kennestone General Hospital. Much like Griffin and Spalding County, the City of Marietta organized to build a new community hospital in the immediate post-war period between 1945 and 1950. Opened in June, 1950, Kennestone initiated its operation as a 105 bed facility amidst much concern as to the practicality of establishing a suburban hospital of this size so close to Atlanta--where several large hospitals were already in existence. However, Kennestone rapidly developed a heavy occupancy and soon had to raise its bed complement to 114, utilizing solarium as wards for beds. A 50 bed addition was completed early in 1955, but by the beginning of 1956, the solarium had again been pressed into service as bedrooms, and yet another 100 bed addition (including a chronic unit) is now nearing completion (18). The hospital is fully expected to reach 300 beds before it begins to meet current space demands.

Located on an eight to nine acre site in a pleasant neighborhood about one and one-half miles from the Marietta town square, Kennestone is a true community hospital in that it does very little nurse or interne training. In fact, there are no independent living accommodations for nurses or other personnel on the hospital grounds.

Similar to Griffin, a number of beautiful, contemporary doctors' office buildings have been built as near to the hospital as possible (refer to Map No. 3). Moreover, the property in back of Kennestone, bounded by Tower Road on the north and Campbell Hill St. on the east is being reserved by its doctor owners for medical office structures only.

Commercial activity is really booming in the near vicinity of this

institution. In addition to a new pharmacy north of Tower Road, a junior size shopping center, complete with food and drug stores, a laundry and a combination beauty and slenderizing salon was opened in the fall of 1958. This hospital-inspired commercial and professional office development has not gone unnoticed. On the contrary, the local newspaper editor personally penned a special article concerning Marietta's new "office and institutional district" last summer. This article is reproduced on the following page, along with a photograph showing the shopping center situated between two of the larger medical arts buildings.

The immediate and astounding success of Kennestone has been attributed in part to its accessible location. Not only is it convenient to Marietta area residents and practitioners, but many northside Atlanta doctors prefer to place their patients in Kennestone since it is more easily and quickly reached than most of the downtown Atlanta hospitals. These factors--a new, modern medical facility; available land for office buildings; nearby service stores; convenience of access and parking; and a pleasant neighborhood environment--all have acted to attract a large and well-qualified staff of doctors, nurses, administrators and other personnel to Kennestone. Only one thing seems to be missing--there has been very little coordinated planning relative to the development of this new "district." As a result, traffic congestion is beginning to present some serious problems, particularly at the intersection of Cherokee Street, Church Street and Tower Road during visiting hours. A four-way stop light has been installed to help shopping center patrons leave the parking area in front of the building.

Also, new hospital parking provisions have recently been completed



DOCTORS' OFFICES, BUSINESSES SATURATING HOSPITAL AREA
New Kennestone Plaza, Dr. Remer Clark's Office Building (Right) Shown Above (Photo By Buster Crowe)

DOCTORS, BUSINESS MOVING IN

Kennestone Spurs North Marietta Development

High on the hills of North Marietta a new business and institutional district is flexing its muscles. Representing an investment in excess of one million dollars, the center now claims nine modern brick structures.

Core of this new business district is thriving Kennestone Hospital, haven for thousands of patients from North Georgia's numerous counties. Development around the hospital has accompanied its continual expansion since it was opened in 1950.

Most of the new structures have been built by Cobb doctors who have chosen to locate as near the hospital as possible. In most cases, several MDs have teamed together to occupy one building. They like the location, they say, because it saves countless hours in commuting back and forth between hospital and their offices.

Offices Scattered

These medical offices are scattered around the hospital in all directions except to the south where a residential section has made development prohibitive.

The doctors, 20 of them at the latest count, now have company. Businesses have joined them in recent months to make the area one

of the city's largest independent commercial centers removed from the central business district and Roswell Street.

First commercial unit to locate in the area was Atherton Drug. Situated on the northwest corner to the immediate rear of Kennestone, it has catered to those seeking fountain service, sundries and prescriptions.

Following close on Atherton's heels is the new Kennestone Plaza, an impressive junior-size shopping center. Built by Bill Dunaway of the local drug chain, it has yet to observe its formal opening. However, the plaza's large drug store and laundry have opened door for business. A grocery and either a beauty shop or florist are to follow.

Warehouse Also

The plaza also contains a large warehouse which will serve Dunaway's five drugstores.

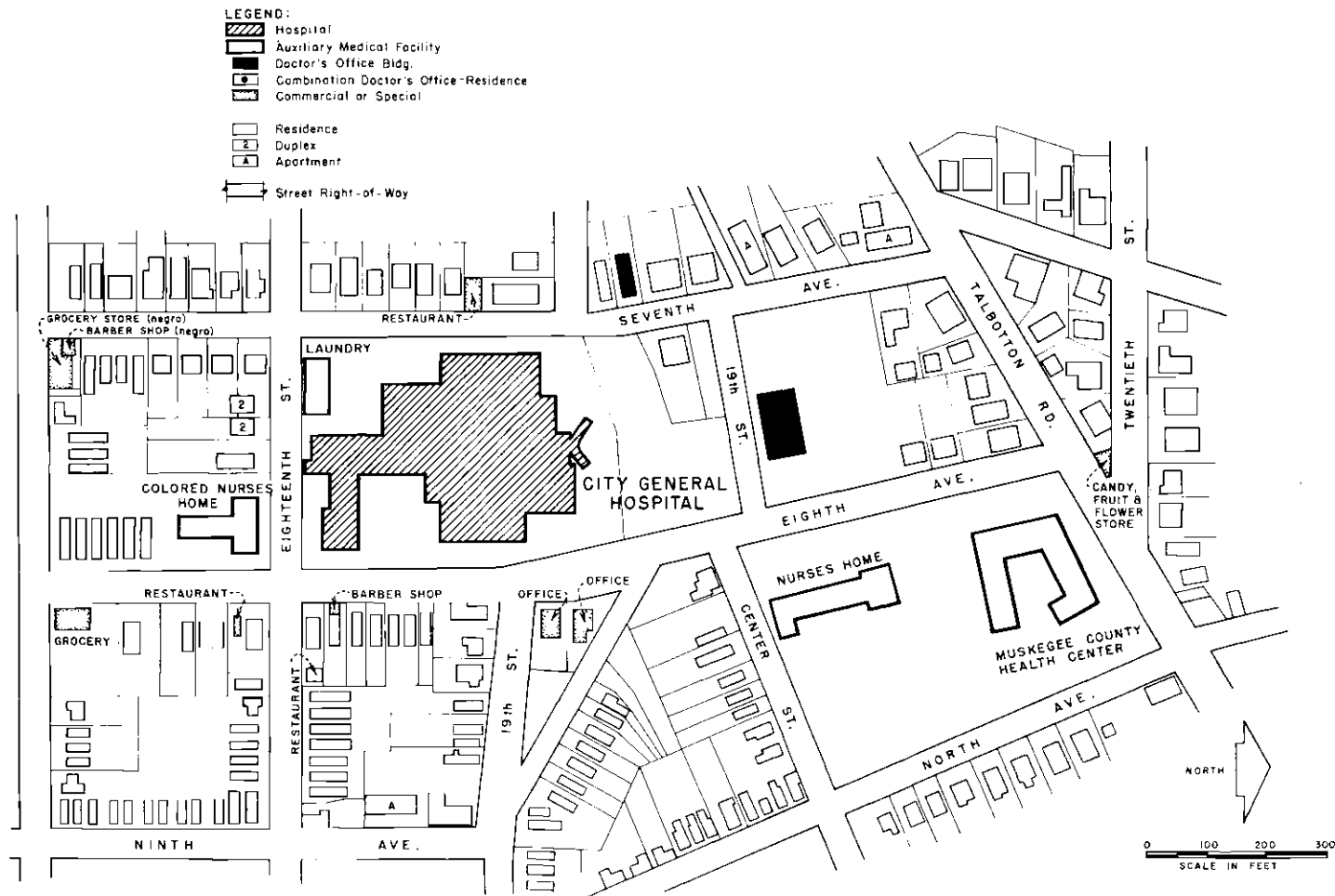
Businessmen who have pioneered development in the Kennestone area express confidence in its future. Pointing out that Kennestone often attracts 10 visitors for every patient, they see a tremendous purchasing power potential. Furthermore, they say that the number of personnel associated with the hospital is nothing to sneeze

at. As far as the future is concerned, they are even more confident. When Kennestone completes the 100-bed addition now underway, it will be the largest general hospital in Georgia north of Atlanta—boasting 300 beds, an expert medical staff and impressive clinics. How will this newly developed area be identified? Perhaps it'll be called Kennestone Medical Center. Or maybe just North Marietta. Those who are investing their dollars there now aren't particularly concerned about this. All they know is that they're convinced that it will become one of the most prosperous and active areas in Cobb County.

on the east side of Church Street. Unfortunately, visitors who use the new lot are almost encouraged to cross this busy artery in mid-block without the benefit of a traffic light. In view of existing land and circulation patterns, the parking area would have been better placed on the other side of lightly travelled Tower Road to the north. As illustrated on the map, however, this property is being used for residential purposes and will likely remain in that capacity as long as the present owner lives. He is a retired old gentleman with a sentimental attachment for the place and enough money to decline several efforts to buy his property--not only by the hospital, but by developers, doctors, and other interested parties as well. His case has been cited for two reasons: (1) similar situations often thwart hospitals in their efforts to obtain expansion land that may be urgently needed; and (2) surrounding land values tend to rise when hospitals are established in a given area. Both conditions represent powerful inducements to pre-plan the entire complex ahead of development.

Central city teaching hospital.--The municipally owned and operated City Hospital of Columbus, Georgia is located about eight blocks north of the downtown shopping district. As illustrated on Map No. 4, this 300 bed institution, its related facilities, and the Muskogee County Health Center are situated near each other, but on separate tracts of land. The entire complex has been officially designated as "The Medical Center."

Since it first opened in 1917, City Hospital has been enlarged on several occasions, the latest and most extensive increase taking place in 1956. At that time, there was considerable agitation to completely rebuild elsewhere on a more spacious site, and in a better neighborhood.



CITY GENERAL HOSPITAL

Bed Capacity: 300

Built: 1917

Area: 10 ACRES (Approx.)

Type of Hospital: TEACHING

Ownership or Control: CITY

Latest Addition: 1956

COLUMBUS, GEORGIA

City Population: 100,000

Medical Service Area

Population: 136,900

4

Negro and white slum housing practically rings the hospital now. The decision to enlarge existing facilities, instead of starting afresh, was essentially based on economic considerations. So much tax money had already been invested over the years in buildings, equipment and land that the hospital's governing board felt compelled to expand on the present site--even though it has admitted deficiencies.

This situation is not an uncommon one. Hospital boards in other urban areas are likewise being forced by today's price levels to remodel or make additions when expansion is called for. Of course, federal Hill-Burton funds have helped many institutions to partially overcome financial problems of this nature, which were formerly solved to a large extent by generous philanthropists.

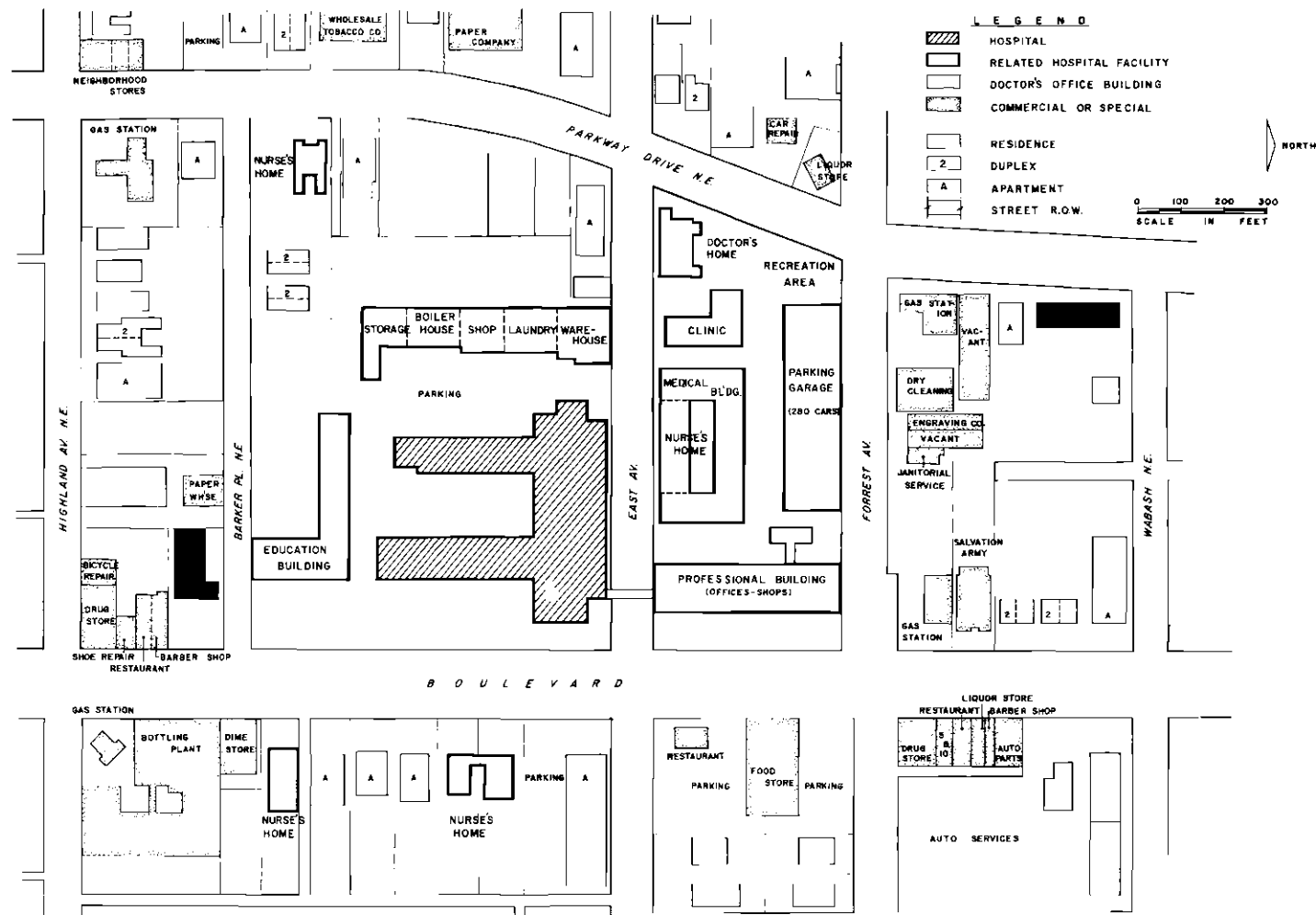
City Hospital's administrator also acts in the same capacity for the County Health Center. Such an organizational arrangement seems to have facilitated the coordination of activities and functions, but it has reportedly been duplicated in only three or four other places in the United States. The hospital operates a school of nursing for 115 students, is large enough to require a sizeable laundry installation, and contains a 12 bed psychiatric wing that soon will be doubled in size. Future plans call for the construction of a 75 bed convalescent facility which is expected to be housed in a separate structure.

Inasmuch as the 1956 expansion definitely committed the institution to remain in its present location for some years to come, City Hospital officials are naturally interested in acquiring additional property to provide for current as well as future needs. One proposal under consideration is to have the surrounding slum area cleared by means of urban

renewal. This would permit a re-design of street patterns and allow all of the various medical units to be on one, instead of three, sites. Also, the present area (about 10 acres altogether) could be expanded to whatever size is deemed necessary. Of even greater importance, the elimination of nearby slum conditions would not only result in a better and more healthful environment for the hospital; it would materially raise property values in the area, thus producing more tax money for the city. The latter could then use this additional revenue to pay for hospital improvements, if it so desired. At least one southern city--Birmingham, Alabama--is developing an urban renewal project around one of its "downtown" hospitals in order to achieve benefits such as those described above.

Church sponsored teaching hospital.--Requiring a yearly budget in excess of four and one-half dollars, the Georgia Baptist Hospital is a non-profit institution operated by the Georgia Baptist Convention, a state-wide association of more than 2,000 churches. Located approximately one and one-half miles from Atlanta's downtown district, this versatile medical facility has provisions for 480 beds and 80 bassinets; includes 15 buildings on 9 acres of land; and trains internes, resident physicians and nurses. The institution's school of nursing can accommodate up to 400 students at one time, and has recently occupied a new education building. A staff of 13 to 15 persons is retained by the hospital to handle the various educational programs offered.

Although it is presently hemmed in by a mixture of commercial and industrial uses, and negro-occupied multiple family dwellings, Georgia Baptist originated its operation on this same site in the early 1900's when the surrounding area was one of Atlanta's best residential neighborhoods.



GEORGIA BAPTIST GENERAL HOSPITAL

BED CAPACITY: 480

BUILT: 1901

LAST ADDITION: 1949

OWNERSHIP OR CONTROL: CHURCH

TYPE OF FACILITY: TEACHING HOSPITAL

ATLANTA, GEORGIA

CITY POPULATION: 500,000

MEDICAL SERVICE AREA: STATEWIDE

5

74

As the city developed into the great sprawling metropolis it is today, the entire section in which the hospital is situated gradually declined in appearance and desirability. Now, the institution and its related facilities are a veritable island of progress in a sea of decay and transition.

As indicated on Map No. 5, warehouse and manufacturing uses exist within one block of the hospital on its western flank. Elsewhere in the vicinity, a haphazard arrangement of stores, restaurants, auto servicing firms, small manufacturing operations, apartment buildings, converted one family dwellings and commercial parking lots can be observed. The latter are primarily operated for hospital visitors.

Like the other central city hospitals analyzed, Georgia Baptist has also been plagued by a short supply of land; by traffic congestion and parking problems; and by noise, odor and other nuisances that too often characterize a highly urbanized locale. Nevertheless, this Atlanta institution has rather successfully produced a satisfactory environment for its employees, professional staff, patients and visitors.

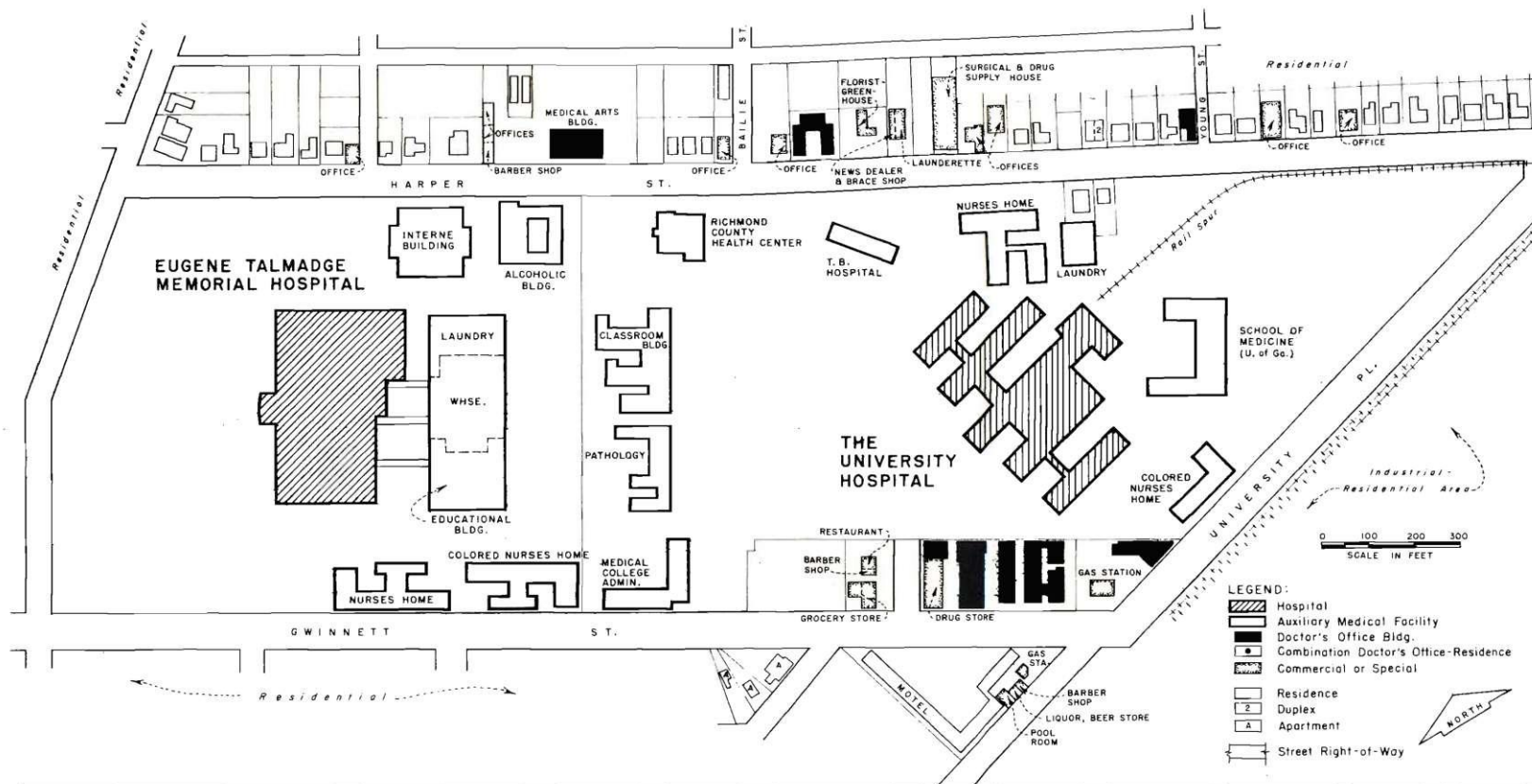
As an example, the modern, beautifully appointed professional building on Boulevard provides convenient accommodations for many physicians, dentists, and specialists who desire to have their private offices located near the institution. Directly connected to the main hospital by a covered passageway that spans East Avenue, the office building currently has 53 doctor tenants on its five upper floors, and two on the first or ground level. The rest of the ground floor is devoted to a shopping arcade which contains an apothecary, a gift shop, a cafeteria, an optical firm, a barber shop and a florist. Currently, much of the income derived

by the Convention through the operation of this building is being used to amortize the construction cost. In the future, however, the largest portion of this revenue can help to support other hospital activities as necessary.

The 280 car, 3-deck parking pavillion, a special recreation area for hospital personnel, and a separate home for doctors are the other elements that have been instrumental in making Georgia Baptist more convenient and more desirable than it otherwise might be in its present location. This hospital and its related facilities are actually functioning as an independent, self-contained community--a community that has continued to maintain a progressive attitude in the face of conditions quite to the contrary in the surrounding neighborhood.

As a concluding point of interest, the hospital administration would be happy to see a motel located in the immediate area. Since Georgia Baptist is supported on a state-wide basis, patients (and consequently visitors) from all over Georgia and even neighboring states are served by this comprehensive medical facility. Persons residing outside of the Atlanta area, who have been referred to Georgia Baptist for special tests, check-ups, or for other reasons not requiring bed confinement, frequently have to stay at downtown hotels many blocks away. A nearby motel could at least eliminate the added cost and inconvenience of commuting back and forth by taxi.

State medical center.--Georgia's most extensive group medical development is located on a 40 acre site one mile from the heart of Augusta, a city of some 100,000 residents (Map No. 6). Comprised of two major hospitals, the University of Georgia's School of Medicine, and several related



COORDINATED STATE SYSTEM - BASE HOSPITAL CENTER

UNIVERSITY HOSPITAL

Bed Capacity: 461

Ownership or Control: UNIV. OF GA.

Combined Site Area: 39-40 ACRES ----- Type of Facility: TEACHING - MEDICAL CENTER

TALMADGE HOSPITAL

Bed Capacity: 800

Ownership or Control: STATE OF GA.

AUGUSTA, GEORGIA

City Population 100,000

Medical Service Area
Population 938,000

6

facilities, this center serves as a referral point for all lesser hospitals in the eastern half of the state.

Initially opened in 1914, the University Hospital has gradually expanded to its present capacity of 461 beds. In contrast, the 800 bed Talmadge Memorial Hospital on the northwest end of the site is only five years old. Each institution has its own laundry unit and provides living and training quarters for nurses and internes. In addition, a special structure for alcoholic patients, and a small tuberculosis hospital are notable units in the overall complex.

A string of mixed uses--office buildings, single-family homes, businesses and apartments--are lined up along Harper Street across from the northeast side of the medical center. The medical arts building on Harper Street contains a pharmacy and soda fountain, a chemical laboratory, a physiotherapy laboratory, an X-ray office, an optician's office, and numerous accommodations for doctors and dentists.

Other uses on this street attracted to the area by virtue of the nearby medical development include a surgical supply and drug company, a small brace shop, a florist and greenhouse and several other doctors' buildings. Five more of the latter are situated near the intersection of Gwinnett and University Place, as is a large motel. This motel, which definitely caters to medical center visitors, is indicative of the center's 50 county sphere of influence. Similarly, the rail lead in to the University Hospital area may be considered as symbolic of the fact that hospitals require an enormous amount of supplies in keeping with their position as America's fifth largest industry.

Summary.--This survey of six widely divergent urban hospital areas proved to be fruitful in many ways. The Marietta and Griffin illustrations document the contention that new general hospitals promote new growth, and possibly neighborhood redevelopment. On the other hand, the Savannah, Columbus and Atlanta study findings show the variations that can occur when a hospital is operated in one location for a long period of years. As pointed out, the Candler facility in Savannah has stabilized and supported nearby property values, whereas both City Hospital in Columbus and Georgia Baptist in Atlanta have been forced to watch the transitional areas which surround them deteriorate in value and prestige due to conditions beyond the control of either institution. It is interesting to note that publicly-supported City Hospital hopes to gain more land for expansion purposes via urban renewal, while privately-sponsored Georgia Baptist is increasing its available space by quietly buying up adjacent and nearby property that has fallen in value as a result of deterioration and conversion.

The hospital survey also demonstrates which land uses find it expedient or convenient to locate near general hospitals. Professional office buildings for doctors and public health centers were the most notable units observed in the vicinity of the newer hospitals. Nurses homes, auxiliary hospital buildings, and converted residence-office accommodations for doctors were found more often in the older institutional area. Such commercial activities as drug stores or pharmacies, restaurants, florists and barber shops were present in every case but Griffin, where just one business (a drug store) has been built to date. The state medical center area in Augusta contained the only motel noted; however,

the need for a facility of this nature near Georgia Baptist was expressed by a hospital official.

The findings of this survey, as reported above, do not cover every hospital area situation by any means, but they do help to illustrate some of the medical facility trends discussed earlier. Moreover, the results suggest that certain types of medical, commercial and residential land uses are located in close proximity to general hospitals often enough to justify the conclusion that they form a natural compatible use group. Chapter IV, which follows, outlines a proposal for such a group development.

CHAPTER IV

PLANNED MEDICAL DISTRICTS: A NEW CONCEPT

As an end product of the overall study, a new planning approach designed to capitalize on the tendency and need for related land uses to cluster around general hospitals has been evolved for consideration. This new approach essentially concerns the possibility of promoting the formation of a more comprehensive type of planned medical group development than has heretofore been attempted. Tentatively designated as "planned medical districts," these proposed group developments are defined and described in the ensuing sections.

Definition and Components

A planned medical district is hereby defined as a "tract of land utilized by a community of medical facility units and related land uses grouped about a general care hospital in accordance with a comprehensive plan of development."

This definition has been deliberately formulated to indicate that only one general hospital facility should be located in these medically oriented group developments. In this way, the ultimate size of planned medical districts can be more easily determined and predicted, and planned medical districts can be distinguished from hospital or medical center groups which are composed of more than one major institution. Thus, Chicago's Medical Center District, the state medical center at Augusta, and hospital complexes situated on college or university campuses as part of a school of medicine would not be included within

the scope of this definition. However, a teaching general hospital which is not a direct unit of a medical school--such as Georgia Baptist in Atlanta or City Hospital in Columbus--could comprise the nucleus for a planned medical district as defined above.

In addition to the hospital proper, these districts may contain any or all of the following elements:

1. A public health center, which could either be a separate part of the general hospital or an independent unit.
2. Home for nurses as required.
3. Nursing facilities for the aged or infirm. Most experts feel that an independent group of small structures located in close proximity to the hospital is the preferred arrangement for this type of facility. Such a grouping might possibly consist of separate housing structures, each capable of handling from 5 to 25 patients apiece, situated about a central unit equipped for recreation, occupational therapy and administration.
4. Professional office buildings primarily for doctors, dentists and other medical specialists, but including some accommodations for professional societies, physician registries, and special organizations or foundations that have a direct need to be located near the hospital.
5. Psychiatric facilities for patients with nervous or mental disorders. This element could be simply a psychiatric ward or wing of the hospital, or it might better take the form of a separate "therapeutic community" of structures, similar in nature to the nursing facility group described under 3 above. Naturally, the units would be designed, equipped and arranged to take full advantage of the latest psychiatric treatment methods and procedures.
6. A "medical shopping center" should be an integral part of the district. This element would most probably contain a combination pharmacy--drug store, a barber and beauty shop, a restaurant, a florist, a gift shop and a dry cleaning establishment. It might also include an optical firm, a uniform shop, a shoe repair shop, a tailor, a truss or surgical support shop, an equipment rental place (wheel chairs, crutches, hospital beds), a book store or other businesses of a similar nature. Two

possibilities exist with respect to the location of this element. It can either be confined to the office building unit or units; or it might be permitted to develop as a separate and distinct entity.

7. Recreation facilities should be provided and made available within the district for hospital personnel, patients in an advanced stage of recovery, and even for visitors to a certain extent. Tennis courts, a swimming pool, horseshoe pits, "bowling on the green" areas and restful park type developments are possibilities for outdoor recreation uses; while a centrally located "community" recreation building having a small auditorium, a library, card rooms and a general lounge would be the most likely indoor recreation facility.
8. Auxiliary structures may also be necessary, especially as adjuncts to the hospital. Storage units, repair shops and buildings housing utility service equipment are examples.
9. Parking lots or buildings designed and located in such a way as to serve more than one facility where possible.
10. As an optional element, specified types of clinical testing or research laboratories might also be located in planned medical districts under controlled conditions.
11. A motel would be another optional element. The need for this unit would be dependent on the geographic area served by the district's general hospital. For example, if the latter is a private institution supported on a state-wide or regional basis (such as Georgia Baptist), then a motel would be appropriate. This element would not be necessary where the hospital serves an area within which daily commuting is feasible.

General Planning Criteria

Size of districts.--As proposed and defined, planned medical districts are to be developed around one general hospital as a central unit.

The total amount of land area required for such a grouping would essentially depend upon the answers to the following three questions:

- 1) What is the optimum contemplated size of the hospital?
- 2) How large a medical service area is involved?

3) What optional elements are permitted to locate within the district?

Although there is a considerable difference of opinion as to what the optimum size of a general hospital should be, most of the hospital administrators, health officials and other medical authorities consulted during this study indicated that a capacity of 500 beds is a desirable upper limit. To accommodate an institution of this size, the Hospital Services Division of Georgia's Department of Public Health recommends that 40 to 50 acres of land be initially acquired, if possible. Within this amount of acreage, there is enough room for such related facilities as a public health center, residential units for nurses (if needed), a doctors office building, recreation and parking areas, and any auxiliary structures that might be necessary. The figure of 40 to 50 acres, then, has been adopted as representing the maximum amount of space needed for the hospital proper and the facilities listed above.

However, the proposed district might well have additional elements such as a separate "medical shopping center;" a series of smaller professional buildings (instead of one multi-story structure); one or two clinical laboratories; or more than one nursing facility for the aged. If the central hospital serves a large region, space for a motel would also be needed. Therefore, in view of the many possibilities that could exist in planned medical districts, it is estimated that between 50 and 100 acres of land would be required for these group developments. As pointed out later, this acreage may or may not be in one ownership.

Location of districts.--The actual placement of planned medical districts in the urban environment can be a reasonably flexible, but nevertheless very important determination. Since these districts require a sizeable tract of land, many locations which are already highly developed must be automatically ruled out. In general, the type and size of area needed will most likely be found in a suburban locale, although downtown districts may be feasible as a result of urban renewal projects.

In any event, the site that is selected for development should be readily accessible from one or more major thoroughfares. The hospital in particular must be easily and conveniently reached by automobile-borne visitors, patients and personnel; by numerous service and supply trucks; and especially by ambulances in times of emergency. A major street should not pass through the district, but the latter may border a main artery as long as sufficient building set-backs are augmented by planting screens to nullify possible traffic noise disturbances. Where a transit system exists, the district should be situated on or very near a regularly scheduled route, as many hospital employees and visitors may need or desire to use public transportation facilities.

Another important locational aspect to be carefully considered is the availability of adequate utility services. Hospitals are heavy users of water, gas and electricity, and their operation is such that standby facilities have to be constantly ready for use in case of emergency. Proper waste disposal is also essential and must be rigidly controlled, especially in view of the fact that new medical treatment methods have introduced the possibility of radioactive waste problems.

The prevailing conditions which exist in nearby areas will certainly be a determinant in the location of a planned medical district. However, with the possible exception of heavy industrial zones, the size and nature of these planned developments is such that they can be situated next to any type of business, light industrial or residential area without adverse effects upon either the medical group or contiguous uses. The ability to control internal environmental conditions by virtue of pre-planning is a feature of this proposed new concept.

Organization, administration and zoning of districts.--At least three distinct, yet equally feasible methods might be utilized to organize, plan for and administer the various elements in a planned medical district. One follows what could be termed a "shopping center approach;" the second involves many of the techniques common to planned industrial districts; and the third represents a voluntary natural grouping facilitated by appropriate zoning controls. Each of these organizational methods is briefly outlined below:

Method A

In this case, every element permitted in the district would come under the direct administrative and supervisory control of the general hospital's governing board. Each related facility would be expected to support or implement the central hospital. The total amount of area needed for such a district would tend to be less than under either of the other two methods, simply because the hospital would serve as the nucleus for a compact grouping of structures designed to operate and function as one comprehensive unit. It is in this respect that method A seems to be similar to shopping centers. The latter are also compactly designed according to the needs and market area of a central facility (supermarket or department store), and a prime effort is made to capitalize on the benefits of a unified operation.

Method B

Quite different in character from the organizational procedure described above, method B would promote internal development through the leasing of various sites within the district proper. Thus, a general hospital and any auxiliary structures it might require would occupy one large tract of land, while a public health center, various professional office buildings, a medical shopping center and similar elements would probably be situated on separate sites designed to meet their individual needs. A hospital authority or special district organization might serve as the "promoting agency," so to speak, of the district, and would also function in an official capacity to see that leasing stipulations or agreements were fulfilled. Although method B cannot match certain of the advantages that are produced as natural by-products of method A's "unified whole" approach, a greater flexibility as to the type and location of district elements is more possible under the "B type" organizational arrangement.

Method C

Essentially a process of encouraging related and compatible land uses to naturally organize into group medical developments, method C involves the establishment of special zoning provisions. For example, existing general hospital areas which are now part of residential or business zones could be separately designated as special institutional or medical districts. Uses which require location near general hospitals would be permitted in these special areas by right, as long as they adhered to the general regulations for such districts as specified in the zoning ordinance. Complete pre-planning would not be possible if this method is used, but many of the principles outlined for fully planned medical districts could be applied in formulating the ordinance provisions.

The so-called "floating" zone technique is a variation of method C that might also be used to advantage. In this instance, planned medical districts might be located in any zoning district (thus the term "floating") as a special exception subject to approval by the Board of Zoning Appeals. The zoning ordinance might stipulate that the Board's decision should be governed by the proposed district's adherence to the following suggested conditions:

- a) permitted uses would be similar to the list of elements included at the beginning of this chapter
- b) a minimum 50-acre site would be required
- c) highway access to the district would be adequate and no undue traffic would be generated on local or minor streets

- d) existing or proposed utility service provisions would be sufficient to meet district needs both now and in the future.
- e) all off-street parking requirements included in the zoning ordinance would be met by each element so affected
- f) similarly, all building set-back provisions would also have to be met where applicable
- g) the district's development on the whole would not adversely affect surrounding areas.

In both variations of method C, the groupings of medically related uses would not be pre-planned in toto, but favorable zoning controls would tend to produce compatible and harmonious developments under natural conditions.

The Value of Planned Medical Districts

One of the chief objectives of the over-all study, as stated in the introduction, was to document the need for and the advantages of planned medical districts. Thus far, the need for treatment and service facilities to group together as a result of recent trends in the world of medicine; the need for more planned group developments of all kinds in our automobile oriented urban areas; and the need for cities to reconsider traditional methods of zoning and locating hospitals have been illustrated in some detail. Now, this concluding section will point up the many continuing advantages that can be realized by patients and their visitors, hospital personnel and the community at large if planned medical districts are utilized to fulfill these demonstrated needs.

Perhaps the most significant medical trend of all is the rapidly spreading philosophy that "the human organism is a single functioning unit, to be treated as such; and that help of some sort can be given

to everyone." (19) This line of thinking is best reflected by the fact that contemporary general hospitals are now often equipped to handle almost any type of ailment or disease. Since these hospitals can more easily change or enlarge the scope and nature of their operational functions if they serve as core units in planned medical districts, it stands to reason that the treatment philosophy expressed above could be furthered and even strengthened by the formation of such group developments. In short, the use of planned medical districts promotes the expansion of general hospital activities and services, and this expansion in turn enables more people to be helped in more ways.

In addition, the close control over internal environmental conditions that is possible within planned medical districts could very well produce earlier patient recoveries in many cases. The amount of space recommended for these proposed districts is large enough to permit a restful and peaceful "therapeutic" atmosphere to be developed and maintained. Pleasant, landscaped grounds; quietness and privacy as required (especially for convalescent and psychiatric units); convenient shopping and recreation facilities; and of course, the knowledge that competent doctors and modern treatment provisions are readily available if needed, all help to facilitate the restoration of health to the ill or disabled.

The urban locations suggested for planned medical districts would also permit friends and relatives to visit patients more often than is feasible when hospitals, sanitariums, and other treatment institutions are situated in isolated locales. Although it is quite possible that too many visitors might be more harmful than beneficial in some cases, the opposite reaction is much more likely to result. Moreover, since

independent facilities for persons in various states of treatment or recovery would be practicable in a planned medical district, different visiting hour "zones" could be established more easily than where all accommodations are in one structure. The shopping, eating and recreation areas would also be appreciated by visitors who found it necessary to wait for long periods of time.

Aside from the benefits mentioned above, a general hospital which served as the chief facility for a planned medical district would be in a better position to acquire and keep a competent staff, than it would if it were located and operated on an independent basis. This means a great deal at the present time, since there is a current and continuing doctor, nurse and medical technician shortage in all parts of the United States. Indeed, small outlying cities such as Griffin could utilize this planned district concept to attract personnel who now feel they must stay in metropolitan areas for various reasons.

Of course, the over-all community stands to gain the most if planned medical districts are situated in the right locations. Like other major group developments, these medical facility complexes can be expected to lead and promote new growth (or a revitalization) in the areas surrounding them. If this growth or change is planned for ahead of time, utility provisions, traffic conditions, commuting times, and other factors can be worked out with little difficulty. However, if new general hospitals are permitted to settle down almost anywhere, the ensuing cluster of uses attracted to the hospital area may well cause a lot of future headaches.

As a concluding point, planned medical districts seem to offer a new tool to both the medical and city planning professions. The

former can utilize this proposed concept to treat persons for almost any kind of affliction right in their home community; while city planners and other municipal officials can use these districts to spur beneficial growth patterns. It is hoped that this study has served to point out these possibilities, as the hospital business can be expected to expand--and it might as well grow in a planned rather than an unplanned manner in our urban areas.

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